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The National Research Council Canada

2024–25 Departmental Results Report

The Honourable Mélanie Joly

Minister of Industry and Minister responsible for Economic Development for Quebec Regions

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The National Research Council's 2024–25 Departmental results report

Contents:

At a glance

This departmental results report details the National Research Council of Canada's (NRC) actual accomplishments against the plans, priorities and expected results outlined in its 2024–25 Departmental Plan.

- Vision, mission, raison d'être and operating context

Key priorities

The NRC identified the following key priorities for 2024–25:

- Climate change and sustainability
- Health and biomanufacturing
- Digital and quantum technologies
- Foundational research

Highlights for the NRC in 2024–25

- Total actual spending (including internal services): $1,708,014,070
- Total full-time equivalent staff (including internal services): 4,504.7

For complete information on the NRC's total spending and human resources, read the Spending and human resources section of its full departmental results report.

Summary of results

The following provides a summary of the results the department achieved in 2024–25 under its main areas of activity, called “core responsibilities.”

Core responsibility: Science and innovation

Actual spending: $1,501,598,130

Actual full-time equivalent staff: 3,402.7

- **Scientific and technological knowledge advances:** The NRC made significant progress in both foundational and applied research, driving innovation in quantum science, artificial intelligence (AI), clean energy and advanced materials. Researchers co-developed scalable quantum circuits, led AI safety efforts, and enabled breakthroughs in next-generation sensors and secure networks. These achievements reflect the NRC’s leadership in collaborative research and its commitment to building national capacity through challenge programs, shared research platforms and support for emerging talent.
- **Innovative businesses grow:** The NRC strengthened Canada’s innovation ecosystem by connecting thousands of small and medium-sized enterprises (SMEs) with expert advice, targeted funding, and specialized services to help bring technologies to market and expand globally. Through enhanced collaboration with public and private partners, the NRC helped companies scale up research and development (R&D), enter new value chains and increase their competitiveness. These efforts supported industrial development and job creation across a range of priority sectors.
- **Evidence-based solutions inform decisions in government priority areas:** The NRC provided science-based insights and technologies to support government decision-making and improve outcomes for Canadians. Key contributions included developing AI-enabled tools for diagnostics and transportation safety, collecting and analyzing environmental data to support climate adaptation policies, and advancing predictive models to strengthen national infrastructure standards such as bridge design and wildfire resilience. These efforts reinforced the effective use of validated scientific and technical information to inform government policies and enabled timely responses to emerging challenges.

For more information on the NRC’s core responsibility of science and innovation read the Results – what we achieved section of its departmental results report.

From the Minister

The Honourable Mélanie Joly

Minister of Industry and Minister responsible for Canada Economic Development for Quebec Regions

It is my pleasure to present the 2024–25 Departmental Results Report for the National Research Council of Canada (NRC).

Over the past year, the NRC and other organizations in the Innovation, Science and Economic Development (ISED) portfolio worked with government, academic and industry partners to support research and innovation that respond to Canada's most pressing challenges. These range from accelerating the clean energy transition to leveraging AI for business productivity.

Guided by its 2024–2029 strategic plan, the NRC made meaningful contributions to national priorities by advancing research and innovation that address these challenges. In 2024–25, the NRC supported the shift to low-carbon transportation by advancing next-generation battery systems and hydrogen-powered aviation, and strengthened Canada's semiconductor and photonics value chains through international collaboration. To strengthen national resilience and defence, the NRC developed technologies for extreme environments and advanced drone capabilities through the Counter Unmanned Aerial Vehicle (CUAV) initiative. It also delivered Canadian-made breakthroughs in quantum technologies and applied artificial intelligence to boost industrial productivity, defence readiness, and sustainable design. NRC projects advanced affordable housing priorities, food security and climate-resilient infrastructure through practical tools and standards. Across these initiatives, the NRC continued to expand collaborative research with industry and academia, and catalyzed high-impact research through Challenge programs that fuel technological breakthroughs and position Canada for long-term success.

The National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) helped more than 9,000 Canadian companies innovate and grow, and supported more than 23,000 jobs across the country. Through strengthened global partnerships, including deeper ties with key economies such as the United Kingdom, Germany and Japan, the NRC helped Canadian firms and researchers access new markets and global opportunities. At the same time, the NRC continued to promote inclusive innovation by advancing research with Indigenous communities and supporting diverse early-career talent across its programs and labs.

I invite you to read this report to learn more about how the NRC is working together with Canadians of all backgrounds and in all regions—urban and rural—to position Canada as a leader in the global economy.

From the President

Mitch Davies
NRC President

At the National Research Council of Canada (NRC), our work is guided by a deep commitment to scientific excellence and innovation that drives results for Canadians. As President, I have the privilege of seeing firsthand the dedication and ingenuity that fuel this mission every day. In 2024–25, we continued to lead with purpose, working in close partnership with industry, academia and government to deliver research and innovation that improves the lives of Canadians and contributes to solving some of the world's most pressing challenges.

Last year marked the launch of our new strategic plan, which is guiding our efforts through an era of accelerating global change. Our focus is on Canada's transition to a more prosperous, sustainable and technologically progressive future. This includes accelerating clean technology solutions, strengthening national resilience through innovation in defence, health, biomanufacturing and critical minerals, and expanding leadership in responsible AI and quantum technologies.

The NRC's achievements this year reflect Canada's top priorities. Through initiatives like the AI for Design Challenge program, we developed ethical, high-impact digital tools to accelerate innovation. In 2024, we reinforced our commitment to digital and quantum technologies by reorganizing our leading quantum capabilities into a new, integrated Quantum and Nanotechnologies Research Centre, positioning the NRC to play a pivotal role in Canada's National Quantum Strategy. Regarding defence and the Arctic, we commissioned a state-of-the-art vehicle simulator to improve the performance of military and research vehicles in extreme conditions, enhancing Canada's resilience and defence capabilities.

We also continued to build a strong, forward-looking research and innovation organization positioned to support industry, small and medium-sized businesses and accelerate economic growth. We modernized our research facilities, improved our digital infrastructure, and enhanced workplace safety and accessibility. Our commitment to employee well-being and equity contributed to record student hiring and national recognition as one of Canada's top employers. We deepened our focus on reconciliation, inclusion, and leadership development to foster a more representative and supportive workplace, leading to more creative and innovative research.

These results were made possible by the dedication of our people and the strength of our collaborations. We remain focused on meeting the moment, raising the bar for excellence in research and innovation, and striving for a better Canada and world through our work. I invite you to read this report to learn more about the NRC's contributions to this vision over the past year.

Results – what we achieved

Core responsibility and internal services

- Core responsibility: Science and innovation
- Internal services

Core responsibility: Science and innovation

In this section

Description

Grow and enhance the prosperity of Canada through the following activities:

- Undertaking, assisting and promoting innovation-driven research and development (R&D)
- Advancing fundamental science and Canada's global research excellence
- Providing government, business and research communities with access to scientific and technological infrastructure, services and information
- Supporting Canada's skilled workforce and capabilities in science and innovation

Quality of life impacts

The NRC is a federal research and innovation organization with a core responsibility of "science and innovation" that enables innovation across the Quality of Life framework. The breadth of services and expertise across the NRC's research centres indirectly supports Quality of Life domains, including "environment," "health" and "society."

The NRC contributes most directly to the "prosperity" domain and, especially, the indicator of "investment in research and development." The NRC's work as an enabler and collaborator with industry also helps develop and grow Canadian firms, thus contributing in the longer term to indicators such as "productivity."

Progress on results

This section details the department's performance against its targets for each departmental result under Core responsibility: Science and innovation

Table 1: Scientific and technological knowledge advances

Table 1 shows the target, the date to achieve the target and the actual result for each indicator under Scientific and technological knowledge advances in the last 3 fiscal years.

Departmental result indicator	Target	Date to achieve target	Actual result
Citation score of NRC-generated publications relative to the world average	1.25	March 31, 2025	2022–23: 1.19 2023–24: 1.28 2024–25: 1.45
Number of peer-reviewed publications generated by the NRC	1,050	March 31, 2025	2022–23: 1,222 2023–24: 1,277 2024–25: 1,473
Number of patents issued to the NRC	100	March 31, 2025	2022–23: 104 2023–24: 166 2024–25: 99
Number of licence agreements	35	March 31, 2025	2022–23: 46 2023–24: 39 2024–25: 46
Ratio of the NRC's workforce made up of equity deserving groups relative to Canadian average labour market availability - Women	1.00	March 31, 2025	2022–23: 1.04 2023–24: 1.07 2024–25: 1.09
Ratio of the NRC's workforce made up of equity deserving groups relative to Canadian average labour market availability - Indigenous Peoples	0.77	March 31, 2025	2022–23: 0.63 2023–24: 0.74 2024–25: 0.77
Ratio of the NRC's workforce made up of equity deserving groups relative to Canadian average labour market availability - Racialized persons	1.00	March 31, 2025	2022–23: 1.00 2023–24: 1.10 2024–25: 1.16
Ratio of the NRC's workforce made up of equity deserving groups relative to Canadian average labour market availability - Persons with disabilities	0.70	March 31, 2025	2022–23: 0.57 2023–24: 0.65 2024–25: 0.71

Table 2: Innovative businesses grow

Table 2 shows the target, the date to achieve the target and actual result for each indicator under Innovative businesses grow in the last 3 fiscal years.

Departmental result indicator	Target	Date to achieve target	Actual results
Percentage of research and development clients who report positive benefits of working with the NRC	90%	March 31, 2025	2022–23: 89% 2023–24: 84% 2024–25: 95%
Percentage revenue growth of firms engaged with the NRC IRAP (NRC Industrial Research Assistance Program-engaged firms)	20%	March 31, 2025	2022–23: 35% 2023–24: 35% 2024–25: 33%
Percentage growth in Canada's science and technology related jobs through NRC supported firms (NRC Industrial Research Assistance Program-engaged firms)	10%	March 31, 2025	2022–23: 21% 2023–24: 21% 2024–25: 13%
Revenue earned from clients and collaborators	$82.0M	March 31, 2025	2022–23: $84.7M 2023–24: $67.1M 2024–25: $69.5M

Table 3: Evidence-based solutions inform decisions in government priority areas

Table 3 shows the target, the date to achieve the target and actual result for each indicator under Evidence-based solutions inform decisions in government priority areas in the last 3 fiscal years.

Departmental result indicator	Target	Date to achieve target	Actual results
Revenue earned from other federal government departments	$80.0M	March 31, 2025	2022–23: $80.4M 2023–24: $93.1M 2024–25: $103.9M
Number of NRC peer-reviewed publications co-authored with other federal government departments	60	March 31, 2025	2022–23: 62 2023–24: 75 2024–25: 68

The Results section of the Infographic for the NRC on GC Infobase page provides additional information on results and performance related to the NRC's program inventory.

Details on results

The following section describes the results for science and innovation in 2024–25 compared with the planned results set out in the NRC's departmental plan for the year. Note: the NRC leveraged its internal generative AI tool (AI Zone) to support the development of content within this report; all AI generated content has been reviewed and validated by a human.

Departmental result: 1 Scientific and technological knowledge advances

The NRC continued to advance research in priority areas for Canada, meeting or exceeding all but 1 performance target for 2024–25. It surpassed targets for peer-reviewed publications and licence agreements and fell short of the patents issued target by just 1, reflecting continued innovation strength. The NRC's growing impact on the global research community is demonstrated by a rising citation score, which once again surpassed the annual target. Internally, the NRC fostered a more inclusive research environment, with increased workforce representation for all equity-deserving groups.

Results achieved

Driving innovation with quantum science and technology initiatives

Quantum science holds immense potential for transformative advancements, and the NRC is committed to harnessing its scientific expertise and collaborative partnerships to drive progress in this rapidly evolving field.

Aligned with the goals of Canada's National Quantum Strategy, which seeks to strengthen the country's leadership in quantum science by uniting government, academia and industry to advance quantum technologies, the NRC's research on programmable photonic quantum circuits represents a significant step forward. The researchers, including the recipient of the NRC's 2025 Luise & Gerhard Herzberg Fellowship, created a scalable platform for quantum information processing based on ultrafast photons. The architecture allowed for 362 highly stable and accurate quantum operations across up to 8 dimensions, which represents a meaningful leap in operational scope and stability over previous systems. This advancement showcases Canada's growing leadership in next-generation quantum technologies with real-world potential.

Also, the NRC, in collaboration with the University of Ottawa (uOttawa), developed PRUNe, a deep learning model that links quantum imaging and neural networks to address challenges such as quantum fluctuations and environmental challenges.

Further strengthening federal leadership in the quantum space, the NRC's Quantum Research and Development Initiative (QRDI) is advancing quantum research and innovation collaborations across government. QRDI fosters cross-sector innovation, including a June 2024 workshop that brought together more than 90 participants from multiple federal departments.

Building on this momentum, the International Conference on the Physics of Semiconductors (ICPS2024) was co-organized by the NRC, uOttawa and Carleton University. The event attracted more than 500 participants from around the world to focus on quantum technology advancements. The conference provided a platform for experts to share insights and collaborate on the future of quantum research, further supporting Canada's National Quantum Strategy and its goal to grow quantum technologies, companies, and talent.

The NRC is also advancing several Challenge programs, which are strategic initiatives designed to address Canada's most critical issues. These programs bring together dynamic, cross-sector teams from

academia, industry and government to accelerate the development and application of quantum technologies across multiple sectors:

- As part of the Internet of Things: Quantum Sensors Challenge program, which aims to advance quantum technologies in collaboration with SMEs, 6 new projects were launched through a joint NRC-NSERC Alliance call. A notable highlight includes a partnership with the University of Alberta and an industry partner to develop airborne standoff quantum sensing for detecting methane leaks from pipelines. Collectively, the projects focus on key areas such as quantum metrology, imaging and semiconductors, supporting scientific discovery and future commercial applications.
- Through the Applied Quantum Computing Challenge program, the NRC launched 11 new research and innovation projects aimed at developing quantum algorithms that support real-world problem-solving. These projects, carried out in partnership with industry, academia and government, focus on accelerating innovation and applying quantum computing to practical needs in the public sector.
- The High-throughput and Secure Networks Challenge program launched 9 new projects in 2024–25 involving 31 partners, advancing technologies such as optical satellite communications, photonics, quantum communications and network metrology. Highlights include Carleton University's development of a testbed for satellite constellation design and NRC–uOttawa's AI-driven system for predicting atmospheric turbulence to improve control of quantum devices.
- The AI for Design Challenge program supported 10 new collaborative R&D projects, including work with Simon Fraser University on motion synthesis. A key achievement was the publication in Nature of a generative AI model for novel perovskite materials with clean tech applications.
- The NRC–University of Waterloo Collaboration Centre launched five projects at the intersection of AI, cybersecurity, and health care, selected through a competitive national call.
- The AI for Logistics Cluster Support Program brought together 30 collaborators to explore AI-driven logistics innovations, including smart mobility cybersecurity, route optimization and drone safety. Notably, the program developed a system for real-world testing of large drone swarms.

These initiatives reflect the NRC's commitment to strengthening Canada's position in both quantum and digital technologies, while building collaborative ecosystems that translate cutting-edge research into national advantage.

Advancing AI discovery and impactful digital technologies

The NRC is advancing AI and digital technologies that are both commercially viable and socially responsible. By addressing the opportunities and risks associated with these technologies, the NRC contributes to the development of sound policies for their responsible use across a wide range of sectors, including defence, manufacturing, automotive and aerospace. This integrated approach helps align technological progress with Canadian values, fostering ethical innovation with transformative potential.

In November 2024, Innovation, Science and Economic Development Canada launched the Canadian AI Safety Institute, with the NRC leading key federal research efforts on AI safety and cybersecurity. In collaboration with international partners, the NRC's work complements ongoing initiatives by the Canadian Institute for Advanced Research and national AI institutes.

During 2024–25, the NRC contributed to global AI safety networks by focusing on areas such as multilingual model evaluation, risk mitigation in AI systems and the detection of deepfakes. This work is essential to promoting the safe and trustworthy development of AI technologies in Canada.

Building on this foundation, NRC-led projects also addressed emerging risks posed by generative AI, including tools for detecting AI-generated content to help mitigate security threats and counter misinformation. At the same time, the NRC is advancing human-centred AI applications in priority sectors such as Canada's immigration and settlement services. These solutions aim to enhance service delivery while safeguarding vulnerable populations, underscoring the NRC's commitment to socially beneficial, ethical AI.

In 2024–25, the Artificial Intelligence for Design (AI4D) program launched 10 new collaborative projects to push the boundaries of AI while promoting ethical use in science and engineering. One of these projects explores ways to improve how AI supports scientific design, with a focus on reducing bias, such as stereotypes and gender bias, so that technologies better reflect principles of equity and inclusion.

The NRC also expanded its AI-driven research infrastructure by installing two self-driving labs at its advanced materials research facility in Mississauga. These state-of-the-art platforms use machine learning to accelerate the discovery of new battery materials and the development of more efficient processing methods, which will support Canada in reducing its reliance on imported critical minerals. Supported through the NRC's Critical Battery Materials Initiative, and developed in collaboration with Natural Resources Canada and industry partners, these platforms demonstrate the power of AI to fast-track sustainable innovation in Canada's clean energy sector.

Building on this work, the NRC is using generative AI to speed up research in high-impact areas such as health and energy. Working with universities and research partners, teams are advancing cancer vaccine research and developing alternative synthetic materials to reduce reliance on critical minerals used in batteries and solar panels. They are also supporting faster development of AI tools by improving computing and data systems, while helping drive progress in areas such as personalized health care and technologies that support aging at home.

Transforming research, industry and defence with AI

The NRC is leading advancements in AI through its applied research efforts across multiple sectors. Through strategic collaboration in applied AI and data analytics, the NRC is helping to transform the automotive and aerospace industries, driving progress in industrial automation and smart manufacturing.

One noteworthy success is the commercialization of AI-SLAM technology for laser additive manufacturing by Braintoy, a Canadian SME. Deployed by industry partners Apollo and BCT, this technology is streamlining production processes and improving efficiency in real-world industrial settings.

As part of a Canada–Germany collaboration, the NRC developed an AI-powered ultrasonic imaging system to improve vehicle assembly quality by detecting hidden defects. It also worked with McGill University and industry partners to boost the accuracy and efficiency of 3D printing using AI-based process monitoring. These innovations support higher manufacturing quality and productivity.

Beyond industry, AI is also revolutionizing military and civilian operations. In particular, the NRC supported Defence Research and Development Canada and the Canadian Armed Forces (CAF) in their efforts to enhance Arctic operations. Researchers are using AI to design smart structures that can change shape to adapt to their environment. This helps save fuel and makes equipment work better in harsh places like the Arctic. This shows how AI can deliver practical solutions in demanding and unpredictable conditions.

Developing the next generation of advanced systems and technologies

AI is transforming the landscape of advanced systems and technologies, enabling greater innovation, precision, and adaptability across sectors such as manufacturing, design, and defence. The NRC is at the forefront of this transformation, working in close partnership with academia and industry to push the boundaries of technological advancement.

In the area of smart manufacturing and materials, NRC-led innovations are improving efficiency and unlocking new capabilities:

- **Welding cobots for the shop floor:** Cobots are collaborative robots that are built to work with people. In collaboration with École Polytechnique de Montréal and industry partners, the NRC's METALTec industrial R&D group launched an intelligent welding cobot subsystem. Designed to work safely alongside humans, this system boosts speed and accuracy in manufacturing while freeing workers for more complex tasks. AI-powered models and a welding parameter database further enhance precision.

- **Optical innovation:** NRC researchers developed a method to 3D print high-quality polymer lenses with no visible layers, earning recognition in Optica and other publications.

- **Next-generation fabrics:** Working with Integran Technologies Inc., the NRC supported the launch of a nanocomposite roll-to-roll production system for advanced fabrics with tunable properties, moving toward commercial applications in aerospace, space and defence.

- **Advanced alloys for emerging sectors:** The NRC also introduced a new process for producing high entropy alloys with precise composition control that is opening doors for innovation in clean energy, defence and advanced manufacturing.

In the mining sector, the NRC expanded its predictive analytics tools to assess how well mine tailings can naturally capture carbon, as highlighted by Troilus Gold Corp.'s recent positive environmental study. The findings showed low acidity and strong neutralizing properties in the ore zones, supporting the potential for carbon capture.

Building on this success, the NRC is now applying these tools at other mine sites to better estimate their carbon mineralization potential and help improve the environmental and economic performance of future mining operations.

The NRC made additional breakthroughs in areas such as fiber optics, optical coatings, power sources for long-life batteries, small satellites, advanced lasers and high-performance transistors. One highlight, in collaboration with the University of Waterloo, was the development of a new design for quantum

communication networks that could allow multiple users to securely share information at the same time. This research, published in EPJ Quantum Technology, shows how NRC scientists are helping to shape the future of secure communications.

In aerospace, the NRC achieved a key milestone by integrating Detect and Avoid technology into autonomous helicopters. This advancement significantly improves the safety and operational effectiveness of unmanned aerial systems. As part of efforts to enhance national security, the NRC also launched a Counter Unmanned Aerial Vehicle (CUAV) initiative, which includes the development of a CUAV testbed and interceptor drones to help protect Canadian airspace from unauthorized threats.

Through these multifaceted efforts, the NRC is paving the way for advanced, reliable systems that meet the evolving demands of modern industry, infrastructure and national security.

Accelerating discovery through advanced astronomy infrastructure

The NRC is at the forefront of advancing astronomical research through cutting-edge technology and sophisticated data management and analysis tools.

One of its key initiatives is the ongoing upgrade of the Atacama Large Millimeter/submillimeter Array (ALMA) radio telescope. Here, the NRC is developing a next-generation digital signal processing system to replace the central correlator. This new system will combine signals from ALMA's 66 antennas to generate high-resolution images of celestial phenomena, significantly enhancing the telescope's observing speed and scientific reach. With the integration facility now ready and liquid cooling successfully tested on the TeraBox Server, the NRC's technology will push the limits of what ALMA can achieve.

Using advanced composite technology, the NRC is building innovative dish structures for the Canadian Hydrogen Observatory and Radio-transient Detector (CHORD) and creating jobs at its White Lake Basin facilities in British Columbia. When finished, CHORD will feature 640 dishes and will be a powerful tool in understanding the origin and evolution of magnetic fields in the universe—an as yet unsolved cosmological problem. It will also localize thousands of Fast Radio Bursts, short bursts of radio light that last only milliseconds, providing new insights into their nature and their potential as tools for exploring the universe.

The NRC will continue to manage and operate one of the most powerful digital science platforms for data-intensive astronomy in the world, the Canadian Astronomy Data Centre (CADC). Currently, the CADC hosts over 3 petabytes of data from more than 200 telescopes, offering researchers worldwide an open, cloud-based environment for large-scale data analysis. With the launch of the Euclid space telescope by the European Space Agency, the CADC now manages vast data archives aimed at unravelling the mysteries of dark matter and dark energy. This helps Canadian astronomers retain access to a broad range of observational wavelengths and leading-edge research infrastructure.

In addition, the CADC is playing a key role in preparing for the Square Kilometre Array (SKA)—a next-generation radio telescope that will be the largest and most powerful in the world. As part of this effort, the CADC is helping to develop the Canadian node of the SKA Regional Centre Network, which will allow astronomers to process and analyze SKA data using standard workstations. The CADC also supports large-scale, data-intensive research in astronomy and astrophysics by working closely with Canadian

universities to provide public access to data from the Legacy Survey of Space and Time at the Vera C. Rubin Observatory.

Shaping the future of measurement standards

As Canada's national metrology institute, the NRC continues to play a pivotal role in ensuring reliable and precise measurement standards that benefit society, the economy and the environment. In 2024–25, the NRC exceeded its targets for measurement services, reinforcing its leadership in scientific accuracy and technological innovation.

One area of focus has been the development of measurement standards for new and emerging technologies, especially in the growing field of quantum science.

The NRC's Metrology Research Centre has made exciting progress in environmental monitoring. It developed a new method for measuring black carbon that works without needing repeated calibration, making it easier and more reliable to track. The team also built a prototype instrument to measure how sunlight is absorbed and scattered across the full solar spectrum. These tools will improve climate models and support advances in renewable energy and atmospheric research. At the same time, improvements in specialized lab techniques are helping researchers measure critical minerals more precisely, which is important for ensuring efficient resource extraction and supporting the clean technologies that depend on them.

In the area of timekeeping, the NRC is contributing to international efforts to redefine the SI (International System of Units) second, which is the global standard for measuring time. Its strontium-based optical clock was recently accepted by the Bureau International des Poids et Mesures (BIPM) for future steering of international time. This marks the first ion clock to achieve that status and highlights Canada's strong role in advancing precise time measurement.

Departmental result 2: Innovative businesses grow

The NRC plays a key role in helping innovative Canadian companies bring their ideas to market, both at home and abroad. In 2024–25, NRC IRAP exceeded its targets for both revenue and employee growth among supported firms, highlighting its continued contribution to Canadian innovation and economic development. While NRC research teams remained active in supporting industry clients, the organization missed its industry revenue target for a second year while still showing an improvement over the previous year. Overall, NRC revenues increased, reflecting a growing contribution in research for federal partners.

The NRC continues to deliver strong value to its clients: 95% of those surveyed reported experiencing benefits shortly after project completion.

Results achieved

Connecting research and industry to transform Canada's innovation landscape

NRC IRAP, a cornerstone of Canada's innovation landscape for over 75 years, continues to support Canadian SMEs, offering invaluable advice, funding and connections. Collaborating closely with research

centres and partners, NRC IRAP worked with 9,187 firms, supporting 23,208 jobs and providing $393.1 million to 3,136 SMEs to help them commercialize new products and services, and foster growth.

This funding included $76 million to 72 leading-edge SMEs under NRC IRAP's Large Value Contribution program, which offers strategic business and technical advice, and financial support of up to $10 million to help Canadian companies scale-up, enter new markets, and undertake R&D projects that can lead to substantial benefits to Canada. In total, NRC IRAP delivered 28,129 advisory services to help businesses make informed decisions and drive sustainable growth.

Esri Canada, for example, leveraged NRC IRAP funding for its ground-breaking Spatial Modelling Analytics & Real-time Tracking (SMART) Mobility project, which reduces urban traffic congestion by up to 15%. This collaboration positioned the firm as a global leader in smart mobility solutions and underscores Canada's pivotal role in driving sustainable urban technologies worldwide.

In 2024–25, NRC IRAP made significant strides by expanding its programming suite, launching specialized programs in AI and clean technology. With an investment of $100 million over 5 years announced in Budget 2024, NRC IRAP designed and launched the AI Assist program to benefit Canadian industry by increasing the competitiveness and innovation capacity of recipients through their accelerated development and deployment of AI. Within the program's first year, more than 325 projects were launched to support innovative Canadian SMEs to develop and deploy new AI-based solutions, with a particular focus on generative AI and deep learning.

In June 2024, the Government of Canada announced that Sustainable Development Technology Canada (SDTC) programming would transition to the NRC. Transition activities took place throughout 2024–25, culminating in the successful onboarding of 54 employees and the development of a new NRC IRAP Clean Technology stream. This new stream focuses on supporting SMEs in developing and commercializing clean technology solutions and strengthening Canada's economy while making meaningful contributions to national climate objectives.

To further bolster SME competitiveness, NRC IRAP established the Market and Technical Intelligence (MaTI) team in 2024–25. Created to identify target markets, strategic technologies and value chain opportunities, MaTI assembled a team of specialized experts, finalized a comprehensive research plan, and initiated key projects. These efforts aim to enhance NRC IRAP's service offerings and better align support with high-potential growth opportunities for Canadian SMEs.

The NRC also increased its support to promising SMEs. In 2024–25, the NRC conducted 409 R&D and technical projects valued at $43.3 million with 239 SME clients, which is a 26% increase in activity and engagement with Canadian SMEs compared to the previous year. These partnerships helped businesses integrate new technologies, improve competitiveness and advance Canada's sustainable economic development. In parallel, the NRC focused on identifying critical innovation needs in strategic value chains for Canada's socio-economic prosperity and security.

Accelerating low-carbon transportation and clean energy innovation

As Canada works toward its 2030 emissions reduction target and the longer-term goal of net-zero by 2050, the need for cleaner technologies across key sectors is becoming increasingly urgent. The NRC is supporting this transition by developing sustainable solutions that reduce energy use and emissions while improving performance.

In aerospace, the NRC collaborated with RTX's Pratt & Whitney Canada and the Innovative Vehicle Institute to develop an advanced high-voltage, bidirectional mobile charging unit (MCU) for the RTX hybrid-electric flight demonstrator project. This state-of-the-art charger, capable of delivering up to 280 kW and 1500 volts, aligns with emerging Megawatt Charging System standards and supports the growing demand for high-voltage power in electric and hybrid-electric aviation systems.

As part of its Materials for Clean Fuels Challenge program, the NRC advanced technologies to help turn carbon dioxide into useful products and support clean hydrogen production. Researchers developed new materials to capture and convert CO_2 into carbon monoxide and ethylene, and tested promising options for scaling up. The program also worked with Canadian company Next Hydrogen to improve catalysts for water electrolysis, a key process for producing clean hydrogen. In total, the program supported 24 research collaborations across academia, industry, and international partners to help accelerate the shift to low-carbon energy.

In agriculture, the NRC developed and tested lightweight composite materials for zero-emission farming equipment. These materials enhance durability while helping reduce emissions from heavy-duty equipment, supporting the shift to low-carbon agriculture practices.

One standout transportation project, CLIP Glazings, involved 7 companies working to replace traditional glass windows in vehicles with lighter, durable polymer alternatives. Coated using innovative techniques like plasma-enhanced chemical vapour deposition and magnetron sputtering, these new materials offer the same protection with 50% less weight. This would help reduce fuel consumption and GHG emissions by up to 160,000 tonnes per year. With applications in the automotive, marine, and aerospace sectors, this breakthrough also strengthens North America's supply chain for sustainable glazing.

Powering sustainable technology initiatives

In 2024–2025, the NRC's Advanced Manufacturing Program launched new collaborative projects with Canadian universities and industry to advance clean technologies, smart manufacturing and high-performance components. These efforts aim to enhance energy storage systems, lightweight solutions and aerodynamic performance across key sectors.

Several additional advanced manufacturing projects delivered practical improvements for industry:

- Optimized aluminum extrusion processes, in collaboration with École de technologie supérieure, produced stronger, more corrosion-resistant and lightweight aluminum alloys for transportation and structural uses
- Autonomous mobile manipulation technologies enabled flexible manufacturing systems using mobile robots, helping factories adapt to changing production needs and reduce downtime.
- Improved production adaptability, in collaboration with the University of Guelph, supported more responsive, efficient and low-waste manufacturing environments
- Developed novel manufacturing techniques for composite, metallic and hybrid aerospace components, including automation for thermoplastic welding and robotic machining of aluminum parts
- High-performance protective coatings for aircraft landing gear, developed with École de technologie supérieure and Concordia University, offered a safer alternative to hexavalent chromium and enhanced corrosion resistance

- A cyber-physical production system, developed with Germany's Fraunhofer Institute, integrated digital and physical manufacturing tools to improve precision and efficiency in processes like friction stir welding and hot forming

Digital innovation remains a core priority for the NRC. In 2024–25, the Aerospace Research Centre advanced digital twin technologies to support smarter maintenance and reduce lifecycle costs for military and civilian aircraft. The NRC also deepened international collaborations in virtual testing to accelerate aeronautical product certification. Data collection for flight simulation models is helping lay the groundwork for more efficient, lower-cost virtual flight testing without compromising safety or performance.

Expanding global impact through innovation and collaboration

In 2024–25, the NRC continued to play a critical role in strengthening Canada's innovation economy by advancing cutting-edge technologies, supporting small businesses and forging key international partnerships.

At the heart of Canada's photonics ecosystem, the NRC's Canadian Photonics Fabrication Centre (CPFC) plays a key role in helping SMEs bring innovation from concept to market. Working with 15 client companies, CPFC provided essential engineering and manufacturing services to support product development. CPFC also actively promoted Canadian innovation by participating in domestic and international events, helping to strengthen Canada's position the global semiconductor supply chain.

The NRC is modernizing the CPFC to expand its role in the AI, quantum and semiconductor sectors. Two major new pieces of equipment were successfully installed in 2024–25, with 2 more slated for 2026. Alongside this investment, a new technology roadmap is guiding efforts to diversify CPFC's client base and reduce access barriers, which reinforces Canada's leadership in next-generation photonics technologies.

On the global stage, 2024–25 marked a banner year for international collaboration. The NRC deepened ties with strategic partners in key economies including the UK, Germany and Japan, and helped Canadian companies unlock new markets and innovation chains through 74 new international co-projects and building an additional 68 co-innovation Action Plan projects. These investments helped Canadian innovators access new markets and opportunities to scale up, while Memorandums of Understanding (MOUs) were signed with the UK's High Value Manufacturing Catapult, Quebec-based MiQro Innovation Collaborative Centre (C2MI) and Compound Semiconductor Applications Catapult to streamline photonic value chains and boost business networks.

The NRC also played a leading role in Canada's co-chairship with Germany of Eureka, the world's largest public network for R&D and innovation. From July 2024 to June 2025, Canada made history as the first non-European country to co-chair Eureka, showcasing its innovation leadership on a global platform. The NRC and Germany organized the Global Innovation Summit, coinciding with the Hannover Messe industrial fair, where Canada had partner country status. With over 900 participants from more than 50 countries, the summit spotlighted Canada's commitment to global collaboration, network sustainability, and technological leadership.

Also, the NRC played a key role in advancing Canada's association in Horizon Europe, the European Union's flagship research and innovation program. With NRC support as National Contact Point in select priority clusters, Canadian universities and companies gained greater access to collaborative R&D opportunities with European partners. The NRC also secured its first successful Horizon Europe project under the new association, focused on studying alternative fuels' impact on non-CO2 aviation emissions, improving modelling and providing data to shape future aviation policy.

Driving efficiency and sustainability in Canada's construction sector

The NRC's Construction Sector Digitalization and Productivity Challenge program supports Canada's transition to low-carbon construction by developing digital tools and promoting modern, efficient building practices. In 2024–25, the NRC advanced 30 collaborative projects with partners from academia, industry and government to explore new technologies, digital standards and best practices.

Highlights include support for a new national standard based on ISO 19650 to guide the use of Building Information Modelling (BIM) across Canada. The NRC also published tools including the BIM maturity assessment guide and worked with BuildingSmart Canada to begin digitalizing the National Model Codes and establish a national data framework.

To address housing challenges, the NRC supported Canada's affordable housing priorities through its Construction Sector Digitalization and Productivity (CSDP) Challenge program by leading national R&D projects to scale up prefabricated housing. This included a case study comparing prefabricated and conventional construction methods in terms of productivity, cost and emissions to identify where prefabrication offers the greatest affordability gains. The NRC also hosted industry-led workshops to surface regulatory barriers and accelerate the adoption of these innovative building approaches.

The NRC also advanced efforts to decarbonize building practices by publishing practical tools and guidance such as the National Whole-Building Life Cycle Assessment Practitioner's Guide, now used across Canada and integrated into academic programs. Updates to the National Master Construction Specification introduced low-carbon design and construction solutions that support the industry's shift toward more sustainable practices.

The NRC's Low Carbon Built Environment Challenge program is helping reduce emissions in Canada's building sector. In 2024–25, the program launched a Centre of Excellence and delivered targeted tools, data and training to support low-carbon construction.

Key achievements:

- Launched the Centre of Excellence for Construction Life Cycle Assessment to provide expert support on measuring and reducing environmental impacts in buildings and infrastructure
- Co-developed the Building Toward Low Cost and Carbon report to showcase practical, affordable design alternatives for lowering embodied carbon in Canadian buildings
- Created 27 new regionally specific life cycle inventory datasets, in collaboration with the Cement Association of Canada and EcoInvent, tailored to Canadian building practices
- Supported 2 Zero Carbon Building Certifications (Canada Pension Centre and Shediac Multi-purpose Centre) in partnership with the Town of Shediac and NB Power
- Delivered national training workshops on whole building life cycle assessment to design professionals in collaboration with the Royal Architectural Institute of Canada

Departmental result 3: Evidence-based solutions inform decisions in Government priority areas

The NRC drives innovative research and embraces emerging methods to advance technology development in partnership with key public and private stakeholders. As a core part of the federal research ecosystem, the NRC has significantly increased its support to other government departments in recent years. In 2024–25, it surpassed targets for peer-reviewed publications co-authored with federal collaborators and revenue generated from federal partnerships. These results reflect the NRC's growing role in creating new opportunities to address Canada's most pressing challenges.

Results achieved

The NRC is driving forward national priorities by connecting its world-class researchers and facilities with partners across academia, industry and government. This collaborative model powers Canadian innovation by advancing vaccines, clean technologies and inclusive research that reflects the needs of all Canadians.

Expanding Canada's biomanufacturing leadership

In 2024–25, the NRC bolstered Canada's biomanufacturing capacity by completing and validating its new clinical trial material facility, enabling early-stage vaccine and biologic production. A successful mock run confirmed readiness and the facility is already attracting interest, with 2 R&D projects underway and 3 client requests in review. Through the Canada Biomedical Research Fund, the NRC also advanced pandemic preparedness by co-leading key initiatives such as Biologics RAMP-UP and collaborations in AI-driven antibody discovery, viral vector platforms and rapid diagnostic development.

The NRC further supported a more integrated national biomanufacturing network. As part of the Canadian Pandemic Preparedness Hub, it contributed to mapping national capabilities and gaps, aligned efforts with the Biologics Manufacturing Centre, and collaborated on real-world R&D challenges. NRC experts helped a Canadian SME resolve a complex bioprocessing issue and co-led a Canada–UK initiative to develop a next-generation antibody–drug conjugate platform.

Through its Disruptive Technology Solutions for Cell and Gene Therapy Challenge program, the NRC advanced 2 first-in-Canada CAR-T therapies into clinical development, creating new options for patients with leukemia, lymphoma and solid tumours. It also licensed a patent pending gene therapy for a rare genetic disorder to a Canadian company committed to domestic production and testing. The NRC also licensed its proprietary vaccine adjuvant technology to Glycovax Inc., a Canadian SME, and partnered with the company to scale-up promising vaccines, including one that targets hard-to-treat infections, leveraging NRC intellectual property.

Accelerating innovation in diagnostics and testing

The NRC advanced its leadership in diagnostics and decentralized health technologies. Through the Collaborative Centre for Research and Applications in Fluidic Technologies, it partnered with Unity Health Toronto to create low-cost CRISPR-based devices that support faster and more accessible testing. This work led to the launch of a new biotech start-up and helped train talent now contributing across Canada's diagnostics and biotechnology sectors.

In collaboration with Canadian manufacturers and government agencies, the NRC also achieved the following:

- Increased production capacity for microfluidic blood analysis devices to support near-patient testing
- Co-developed a portable syphilis test with the Public Health Agency of Canada (PHAC) that functions without laboratory equipment
- Designed a multi-virus diagnostic device with PHAC and the Canadian Food Inspection Agency to support public and animal health

The NRC clinically validated its bWell cognitive assessment platform for pediatric use and advanced its VitalSeer computer vision technology to support diagnostics for ADHD and cardiac conditions. These tools highlight how affordable, AI-enabled innovations can improve timely and inclusive care.

Under its Aging in Place Challenge program, the NRC supported 5 Canadian SMEs in advancing digital health and virtual care solutions. Key outcomes included cost-effective, non-invasive tools for health monitoring and cognitive assessment using technologies such as webcam-based eye-tracking and speech recognition. These solutions help meet the needs of aging populations while easing pressure on long-term care systems.

Transforming transportation and defence technologies

The NRC made significant progress in transportation and national defence innovation. It launched a Driver-Hardware-in-the-Loop (DHIL) simulator to support performance testing of military vehicles in Arctic environments, in partnership with Defence Research and Development Canada through the Investigating the Capability and Enhancement of CAF Arctic Platforms (ICECAP) project.

Additional ICECAP activities included modelling, laboratory testing and field trials in the Arctic. These efforts led to new sensor systems, testing technologies and improved tools for Royal Canadian Navy operations and the Canadian Arctic Shipping Risk Assessment System. The DHIL simulator is also being used in the international SafeTrucks project, where the NRC is helping develop and commercialize winter safety technologies for commercial trucks.

To further support transportation infrastructure, the NRC partnered with Transport Canada to create an instrumented railcar platform. This mobile testbed gives shortline rail operators a cost-effective way to evaluate new technologies while also contributing data to modernize railway safety regulations and analytics.

In maritime and aerospace sectors, the NRC transferred advanced ship airflow tools to industry partners for the design of Canada's new River-Class Destroyer. It tested defence sensors under Arctic conditions, made progress in 3D printing of high-performance materials, supported NATO submarine rudder design, and developed better data tools to assist the Royal Canadian Air Force with equipment maintenance and diagnostics.

Climate-ready solutions for a resilient Canada

As climate risks increase, the NRC is helping Canada adapt through innovation in infrastructure, transportation, agriculture and marine systems. In 2024–25, it supported 80 projects through the Climate Resilient Built Environment Initiative, contributing to new wildfire protection and coastal risk standards, and helping update national bridge design guidance. It also monitored 19 municipal sites to evaluate how nature-based solutions mitigate flooding and erosion.

To improve food security, the NRC advanced climate-resilient agriculture through national breeding programs that apply AI, imaging and gene-editing tools. It partnered with universities, producer groups and Northern communities to enhance wild rice and blueberry cultivation in changing ecosystems. Modular growing stations such as the Growcer XL are helping expand sustainable food production in remote regions.

To accelerate the shift to zero-emission transportation, the NRC tested 21 lithium-ion batteries for e-bikes and e-scooters, contributing to national safety guidelines. It advised the RCMP on integrating electric vehicles into its fleet and address battery range concerns. The NRC also adapted vehicle airflow modelling tools to assess energy use in drones and simulate airflow in urban environments, helping pave the way for safe and efficient low-emission urban air mobility.

Working with Transport Canada, the NRC made progress on developing a national measurement standard for electric vehicle (EV) charging. It also began building a new facility to test high-voltage EV components, enhancing the safety and performance of Canada's electric transportation infrastructure.

To help decarbonize Canada's marine sector, the NRC supported the Canadian Coast Guard's fleet decarbonization plan, created digital tools for lower-emission operations and advised Transport Canada on future clean marine strategies. It also led national working groups on marine autonomy and tested fuel-efficient vessel designs with Canadian ship owners.

In ocean innovation, the NRC worked with First Nations and partners like Cascadia Seaweed and Merinov to restore kelp beds, model marine ecosystems and establish Canada's first seaweed breeding program. New marine monitoring stations off the coast of Nova Scotia now collect data that supports national efforts in climate adaptation and ocean conservation.

Together, these efforts position the NRC as a key player in building a more sustainable, climate-ready Canada, protecting natural ecosystems, supporting food systems and reinforcing vital public infrastructure.

Reconciliation in action

The NRC is advancing reconciliation by forging meaningful partnerships with Indigenous communities, researchers and innovators. By weaving together Indigenous and Western knowledge systems, it is helping reimagine research approaches and co-create solutions that reflect the needs and perspectives of all people living in Canada.

In 2024–25, the NRC launched an internal engagement guide to help staff integrate Indigenous priorities into research and operations. Through the Canadian Indigenous languages technology project, it developed text-to-speech systems in Kanien'kéha, Plains Cree and SENĆOŦEN, addressing a critical gap in audio learning resources. New automatic speech recognition tools are helping communities unlock

and use decades of untranscribed audio recordings, while interactive grammar tools in Oneida and SENĆOŦEN support language revitalization and instruction.

The NRC's Arctic and Northern Challenge program advanced technologies that address local priorities such as housing, health, food security and environmental monitoring. Projects included energy-efficient housing retrofits, virtual reality tools for mental health, ice-monitoring systems for food access and improved water management. The program's flexible, collaborative approach is helping Northern small and medium-sized enterprises grow, innovate and contribute to community well-being. A new round of development grants is already seeing increased uptake, thanks to simplified reporting, strong NRC support and inclusive review processes guided by a Northern-based advisory committee.

The Canada-Inuit Nunangat-United Kingdom (CINUK) research program concluded its research phase in 2025 with strong results. Of 6 NRC-supported projects, 4 secured follow-on funding. Outcomes included practical tools for mould detection, off-grid energy assessments, sea-ice safety and climate adaptation. The program also created local jobs, supported training and strengthened collaboration among Northern communities, Canadian and UK researchers, and policy partners.

Key risks

In 2024–25, the NRC identified key risks stemming from several factors, including aging infrastructure, economic uncertainty, potential cyber-attacks, and challenges in talent attraction and retention.

To mitigate the risks associated with aging infrastructure, the NRC initiated its first wave of facility projects and established a systematic process to prioritize future investments in buildings and facilities. This proactive approach helps align infrastructure upgrades with strategic goals.

Economic uncertainty, especially the effects of tariffs on Canadian exports and U.S. imports, created real challenges for Canadian industries. In response, the NRC assessed the potential financial impacts, monitored the impact on NRC operations and collaborated with central agencies and other government departments to support greater use of Canadian goods and services.

Recognizing that cyber security is a constant priority, the NRC reinforced its Cyber Security Event Management Plan by developing threat-specific response plans, augmenting detection capabilities and regularly testing NRC's cyber security posture while enhancing employee training to bolster cyber security awareness, along with continued efforts focused on strengthening the NRC's systems.

To address talent attraction and retention challenges, the NRC is executing an ongoing Talent Attraction Strategy, underpinned by a compelling employer value proposition. This strategy contributed to the NRC's recognition on Forbes 2025 Canada's Best Employers list and as one of Canada's Top 100 Employers for Young People as published in the Globe and Mail. To build on this momentum, the NRC launched a refreshed employer brand and participated in 26 career events that reached more than 27,000 job seekers.

Resources required to achieve results

Table 4: Snapshot of resources required for science and innovation

Table 4 provides a summary of the planned and actual spending and full-time equivalents required to achieve results.

Resource	Planned	Actual
Spending	$1,423,622,051	$1,501,598,130
Full-time equivalents	3,342.6	3,402.6

The Finances section of the Infographic for the NRC on GC Infobase page and the People section of the Infographic for the NRC on GC Infobase page provide complete financial and human resources information related to its program inventory.

Related government priorities

This section highlights government priorities that are being addressed through this core responsibility.

Gender-based Analysis Plus

The NRC remains committed to embedding equity, diversity and inclusion across its research, programs and operations. Through governance structures, staff engagement and targeted initiatives, the NRC continues to keep GBA Plus considerations at the forefront of how it works with and for all Canadians.

- **Governance:** The NRC's Secretary General serves as the GBA Plus Champion and represents the organization in federal networks, supported by a dedicated Focal Point who coordinates internal efforts. In 2024–25, the NRC provided guidance to staff, responded to GBA Plus enquiries and actively participated in interdepartmental working groups led by Women and Gender Equality Canada and Environment and Climate Change Canada.
- **Capacity:** In 2024–25, the NRC launched a new Equity, Diversity and Inclusion (EDI) Strategy that focuses on embedding inclusion in program design and delivery alongside goals related to recruiting and advancing diverse talent, fostering an inclusive and anti-racist culture, addressing systemic barriers and ensuring measurable progress. This was supported by mandatory training for all staff on EDI fundamentals and unconscious bias, required training for supervisors on bias in hiring, anti-racism and targeted GBA Plus training, and an internal hub for resources. Quarterly Inclusive Innovation Community of Practice meetings also fostered ongoing dialogue on the NRC's internal and external impacts.
- **Indigenous engagement:** In alignment with the Truth and Reconciliation Commission's Calls to Action, the NRC continued to build intercultural competency as a foundation for long-term relationships with First Nations, Inuit and Métis communities. In 2024–25, the Indigenous Strategy and Engagement team advanced awareness and coordination of Indigenous engagement efforts across the organization.
- **GBA Plus data collection plans:** The NRC continued to implement its Accessibility Plan 2023–25 by tracking action items through the Special Purpose Real Property Program. Since the addition of GBA Plus criteria in 2023–24 to help make infrastructure decisions more inclusive, data collection was underway in 2024–25 for current revitalization projects, with new proposals expected to begin reporting in 2025–26.

United Nations 2030 Agenda for Sustainable Development and the Sustainable Development Goals

In 2024–25, the NRC made notable contributions to the UN's Sustainable Development Goals identified in Canada's Federal Sustainable Development Strategy. The NRC's work supported progress on the following goals:

- Climate Action
- Affordable and Clean Energy
- Industry, Innovation and Infrastructure
- Sustainable Cities and Communities
- Inclusive and Sustainable Economic Growth
- Responsible Consumption and Production
- Advancing Reconciliation

Achievements include advancing climate-resilient infrastructure and agriculture, expanding clean technology R&D, supporting Indigenous-led innovation and accelerating inclusive economic growth through targeted support for SMEs. The NRC also helped reduce environmental impacts by enabling more sustainable production methods and promoting circular economy approaches.

More information on the NRC's contributions to Canada's Federal Implementation Plan on the 2030 Agenda and the Federal Sustainable Development Strategy can be found in our Departmental Sustainable Development Strategy.

Program inventory

The following programs support science and innovation:

- Aerospace
- Aquatic and Crop Resource Development
- Automotive and Surface Transportation
- Business Management Support (Enabling)
- Biologics Manufacturing Centre
- Canadian Photonics Fabrication Centre
- Collaborative Science, Technology and Innovation Program
- Construction
- Design and Fabrication Services (Enabling)
- Digital Technologies
- Energy, Mining and Environment
- Genomics Research and Development Initiative Shared Priority Projects
- Herzberg Astronomy and Astrophysics
- Human Health Therapeutics
- Industrial Research Assistance Program
- International Affiliations
- Medical Devices
- Metrology
- National Science Library

- Ocean, Coastal and River Engineering
- Quantum and Nanotechnologies
- Research Information Technology Platforms (Enabling)
- Special Purpose Real Property (Enabling)
- TRIUMF

Additional information related to the program inventory for science and innovation is available on the Results page on GC InfoBase.

Internal services

In this section

Description

Internal services refer to the activities and resources that support a department in its work to meet its corporate obligations and deliver its programs. The 10 categories of internal services are:

- Management and Oversight Services
- Communications Services
- Legal Services
- Human Resources Management
- Financial Management
- Information Management
- Information Technology
- Real Property Management
- Materiel Management
- Acquisitions Management

Progress on results

This section presents details on how the department performed to achieve results and meet targets for internal services.

This year, the NRC focused efforts on modernizing its research infrastructure and digital capabilities, strengthening security and corporate services and fostering a diverse, inclusive and healthy workforce. These integrated initiatives have enhanced the NRC's operational efficiency, safeguarded innovation and positioned the organization as an employer of choice, while ensuring accessible and inclusive practices across all levels.

Modernization and digitalization for research impact

In 2024–25, the NRC made progress on several facility renewal projects that aim to boost research capacity by adding digital tools like sensors, automation and secure data systems. These upgrades are designed to enhance how scientists collect, share and analyze data in real time.

Key achievements include:

- **Ocean research upgrades:** A contract was awarded for a new bridge simulator as part of a digital twin for NRC's wave and ice tank facility. Concept design is complete and software development is underway.
- **Multi-Role Aviation Platform for the Environment (MAPLE):** Equipment needs were defined and planning began for secure data transfers from air-to-ground systems.
- **Critical minerals research:** In Mississauga, robotic lab equipment was procured and integration started for a new Material Acceleration Platform.

These projects demonstrate how digital transformation is helping modernize NRC facilities, improve data sharing and support cutting-edge research in areas like ocean science, aerospace and battery supply chains.

In 2024–25, the NRC worked to renew its research infrastructure by advancing 18 facility renewal projects while formalizing key project management processes and reporting tools to enhance oversight and accountability. It launched new initiatives such as InvestTOGETHER and the Building Recapitalization Fund to improve investment planning and introduced a structured intake process for future capital projects, including health, safety, IT and environmental risk assessments.

Additionally, the Office of Facility Renewal Management strengthened work to identify lessons learned, and to incorporate GBA+ into project proposals, and also built a process through which business owners identify benefits and track their progress.

In collaboration with Shared Services Canada, the NRC enhanced its researchers' access to secure and modern IT environments, boosting productivity and digital security. Key achievements included expanded use of more secure networks by research labs, contributions to SSC's Network Pathfinder project aimed at developing additional capabilities and flexibilities required for research labs, and active involvement in national science data initiatives like Federal Open Science Repository of Canada and the Data Hub. Moreover, the NRC advanced its digital and cybersecurity infrastructure by integrating AI tools, launching student-led AI projects to automate tasks and enhance service delivery through customized knowledge bases.

Enhancing security and corporate services

To protect Canadian research and innovation, the NRC implemented its Policy on Research Security. This policy is designed to safeguard intellectual property, sensitive data and scientific expertise from unauthorized access or transfer, reinforcing the importance of research security to Canada's economy and national interests. As part of this effort, the NRC developed tailored guidance for researchers, delivered targeted training on risks such as foreign interference and open-source intelligence, and increased awareness across the organization. These actions play a vital role in strengthening the NRC's security posture and ensuring a safe and resilient research environment.

Health, safety and environmental matters remained top priorities for the NRC. In support of this commitment, the NRC hosted its first Stand Up for Safety Week and participated in the North American Safety and Health Week. More than 100 people joined each of 9 "HSE Snacks and Facts" sessions, and the Good Catch Campaign encouraged more proactive safety reporting. The team also issued 2 Hazard

Alerts and audited over 90% of rooms for outdated chemicals, resulting in the removal of over 10,000 bottles containing 32,000 litres and 7,600 kilograms of hazardous materials.

The NRC also launched 5 enterprise tools, including a modernized Hazardous Occurrence Investigation Report system and an Accountability Framework to clarify employee responsibilities. As part of the ongoing Make it Safe! campaign, 57% of surveyed employees reported increased safety awareness at work compared to before the campaign's launch.

Robust corporate services are essential to enabling effective program delivery and driving innovation across the organization. In response to expanded procurement authorities and flexibilities introduced in June 2024, the NRC strengthened its procurement capacity by increasing staffing, updating its procurement management framework and launching a formal monitoring program to enhance quality assurance.

To reinforce sound internal governance and oversight, the NRC established a new Contract Review Committee chaired by the Chief Financial Officer and an external Procurement Oversight Board. These improvements position the NRC to better manage a growing volume and complexity of procurement while advancing broader government commitments related to accessibility, sustainability and Indigenous procurement.

Empowering a diverse, inclusive and innovative workforce

In 2024–25, the NRC continued to support employee well-being through a strong mental health and wellness program available to all staff and their families. The program provided access to counselling and mental health resources. The Wellness Ambassador Network promoted tools, events and services, drawing 1,017 participants to 72 events provided through the Canadian Innovation Centre for Mental Health in the Workplace. Notably, there was a 25% increase in manager participation. To further strengthen mental health support, 239 supervisors participated in crisis response training, and by March 2025, 78% of active supervisors had completed the training.

Co-hosted by the NRC and the Office of the Chief Science Advisor of Canada, the 2025 Symposium celebrating the success of women in STEM marked the International Day of Women and Girls in Science. This two-day virtual event highlighted the vital contributions of women in science and innovation, and explored how their work is helping to advance Canada's most pressing priorities. Organized in collaboration with Defence Research and Development Canada (DRDC) and the Public Health Agency of Canada (PHAC), the symposium drew over 1,800 participants from across the federal public service, academia, industry and every region of the country.

The NRC also published its Equity, Diversity and Inclusion (EDI) Strategy 2024–2027 to align with federal priorities such as the *Accessible Canada Act* and the Call to Action on Anti-Racism, Equity and Inclusion. Representation of women and racialized employees continued to exceed labour market availability, while the percentage of Indigenous employees and employees with disabilities also increased. These gains were supported through updated hiring goals, outreach initiatives and workplace activities led by employee networks including the Women in Science and Innovation Network, the Black Employee Resource Community (BERC), the Persons with Disabilities Network and the newly established 2SLGBTQIA+ Network. To help prepare high-potential Indigenous and racialized employees for

leadership roles, the NRC completed a pilot phase of its Sponsorship Program. During this phase, 26 protégés were matched with 12 senior leaders. A second cohort began in the same fiscal year.

Student hiring reached a 5-year high, with 564 students joining the organization, including 7 students hired through the NRC Indigenous Student Recruitment Initiative. The NRC also welcomed 13 postdoctoral fellows and 20 research associates into its STEM workforce, helping build the next generation of scientific talent. To support employee development and leadership growth, the NRC introduced new career development tools and continued offering learning opportunities. This included tools to prepare for career conversations, live virtual learning for supervisors and an in-person forum for executives.

The NRC is developing tools, templates and training to support employees in embedding inclusive and accessible practices in their work. These efforts are reflected in the strong engagement with accessibility-related content, which accounted for 18% of intranet views. As part of this commitment, numerous web pages were reviewed and updated to better align with accessibility best practices, and intranet updates are underway to further improve user experience. These actions have improved access to information for diverse audiences, strengthened internal engagement and embedded inclusion as a core element of all communications efforts.

By advancing modernization and digital transformation, enhancing security, leveraging corporate services and promoting equity, diversity and inclusion, the NRC has strengthened its internal services and capacity to more effectively support its mandate.

Resources required to achieve results

Table 5: Resources required to achieve results for internal services this year

Table 5 provides a summary of the planned and actual spending and full-time equivalents required to achieve results.

Resource	Planned	Actual
Spending	$171,520,923	$206,415,940
Full-time equivalents	1,056.5	1,102.0

The Finances section of the Infographic for the NRC on GC Infobase and the People section of the Infographic for the NRC on GC Infobase provide complete financial and human resources information related to its program inventory.

Contracts awarded to Indigenous businesses

Government of Canada departments are required to award at least 5% of the total value of contracts to Indigenous businesses every year.

The NRC's results for 2024–25:

Table 6: Total value of contracts awarded to Indigenous businesses[1]

As shown in Table 6, the NRC awarded 5.85% of the total value of all contracts to Indigenous businesses for the fiscal year.

Contracting performance indicators	2024–25 results
Total value of contracts awarded to Indigenous businesses[2] (A)	$5,802,482.19
Total value of contracts awarded to Indigenous and non-Indigenous businesses[3] (B)	$316,162,445.66
Value of exceptions approved by deputy head (C)	$216,912,845.00
Proportion of contracts awarded to Indigenous businesses [A / (B−C) × 100]	5.85%

[1] "Contract" is a binding agreement for the procurement of a good, service, or construction and does not include real property leases. It includes contract amendments and contracts entered into by means of acquisition cards of more than $10,000.00.
[2] For the purposes of the minimum 5% target, the data in this table reflects how Indigenous Services Canada (ISC) defines "Indigenous business" as either:

- owned and operated by Elders, band and tribal councils
- registered in the Indigenous Business Directory
- registered on a modern treaty beneficiary business list

The approved exceptions shown above were based on a thorough analysis of the NRC's procurement activity compared to the Indigenous business market availability. These exceptions reflect that intellectual property rights or the specialized nature of research equipment limit supply to a particular supplier, without reasonable alternative or substitute good or service.

In 2024, the NRC introduced the Indigenous Procurement Strategy and Action Plan, underscoring its strategic commitment to increase the total value of contracts awarded to Indigenous businesses each year. The NRC determined capacity by conducting market analysis and search capacity using the Indigenous Business Directorate and participated in outreach activities with Indigenous communities, such as reverse trade shows.

In its 2025–26 Departmental Plan, the NRC reaffirmed its commitment to award 5% of the total value of its contracts to Indigenous businesses. The NRC will continue to leverage its Indigenous Procurement Strategy and the procurement planning exercises, in support of this important initiative. The NRC is committed to using data analytics to identify and mitigate capacity gaps, recognize Indigenous opportunities and trends, and collaborate with other government organizations to enhance Indigenous business opportunities in federal procurement.

The inclusion of clauses and evaluation criteria to favour Indigenous companies are added to the NRC's calls for tender documents. To incentivize general contractors to support and provide direct and indirect opportunities to Indigenous Owned Businesses, it incorporates, where possible, socio-economic considerations by integrating an Indigenous Participation Plan.

Spending and human resources

In this section

Spending

This section presents an overview of the department's actual and planned expenditures from 2022–23 to 2027–28.

Refocusing Government Spending

In Budget 2023, the government committed to reducing spending by $14.1 billion over 5 years, starting in 2023–24, and by $4.1 billion annually after that.

As part of meeting this commitment, the NRC identified the following spending reductions:

- 2024–25: $ 10,443,461
- 2025–26: $ 20,428,288 ($ 14,928,288 excluding Innovative Solutions Canada grant)
- 2026–27 and after: $ 26,564,962 ($ 21,064,962 excluding Innovative Solutions Canada grant)

During 2024–25, the NRC worked to realize these reductions through the following measures:

- Reduction in government funded expenditures ($4.6M) across its research activities primarily financed through cost-sharing activities with collaborators and clients
- Reduction in enabling and Internal Services expenditures ($5.6M) primarily attributed as a result of the savings targets associated with professional services which were primarily realized within NRC's capital-based project expenditures
- Reduction on transfer payments ($0.3M) supporting collaborative research projects

Budgetary performance summary

Table 7: Actual 3-year spending on core responsibility and internal services (dollars)

Table 7 shows the money that the NRC spent in each of the past 3 years on its core responsibility and on internal services.

Core responsibilities and internal services	2024–25 main estimates	2024–25 total authorities available for use	Actual spending over 3 years (authorities used)
Science and innovation	1,423,622,051	1,727,111,214	• 2022–23: 1,306,954,477 • 2023–24: 1,328,737,018 • 2024–25: 1,501,598,130
Internal services	171,520,923	207,400,073	• 2022–23: 163,802,501 • 2023–24: 197,243,636 • 2024–25: 206,415,940
Total	**1,595,142,974**	**1,934,511,287**	• **2022–23: 1,470,756,978**

Core responsibilities and internal services	2024–25 main estimates	2024–25 total authorities available for use	Actual spending over 3 years (authorities used)
			• **2023–24: 1,525,980,654** • **2024–25: 1,708,014,070**

Analysis of the past 3 years of spending

The most significant factor in the upward trend in spending over the past 3 fiscal years, from 2022–23 levels, is related to new funding provided to the NRC to renew its scientific infrastructure, implement new research programs to support Canadian priorities and participate on international initiatives. More specifically, over the last 3 years, the NRC has implemented significant capital renewal projects (2022 Fall Economic Statement), supported Canada's Quantum (Budget 2021) and Critical Minerals (Budget 2022) Strategies, and invested resources toward Canada's participation in the construction and operation of the Square Kilometre Array Observatory (SKAO).

Furthermore, the NRC's expenditures have increased over the 3-year period as a result of payroll obligations following the ratification of collective agreements and from a progressive increase in statutory revenues, which temporarily decreased during the COVID-19 pandemic.

The Finances section of the Infographic for the NRC on GC Infobase offers more financial information from previous years.

Table 8: Planned 3-year spending on core responsibility and internal services (dollars)

Table 8 shows the NRC's planned spending for each of the next 3 years on its core responsibility and on internal services.

Core responsibilities and internal services	2025–26 planned spending	2026–27 planned spending	2027–28 planned spending
Science and innovation	1,565,691,658	1,496,559,220	1,449,263,737
Internal services	196,487,307	200,005,773	199,573,597
Total	**1,762,178,965**	**1,696,564,992**	**1,648,837,334**

Analysis of the next 3 years of spending

Increased planned spending in 2025–26 is primarily due to the transfer of Sustainable Development Technology Canada (SDTC) programming and employees to the NRC completed in the last quarter of 2024–25. The decrease in subsequent years is due to reduced funding associated with several sunsetting programs.

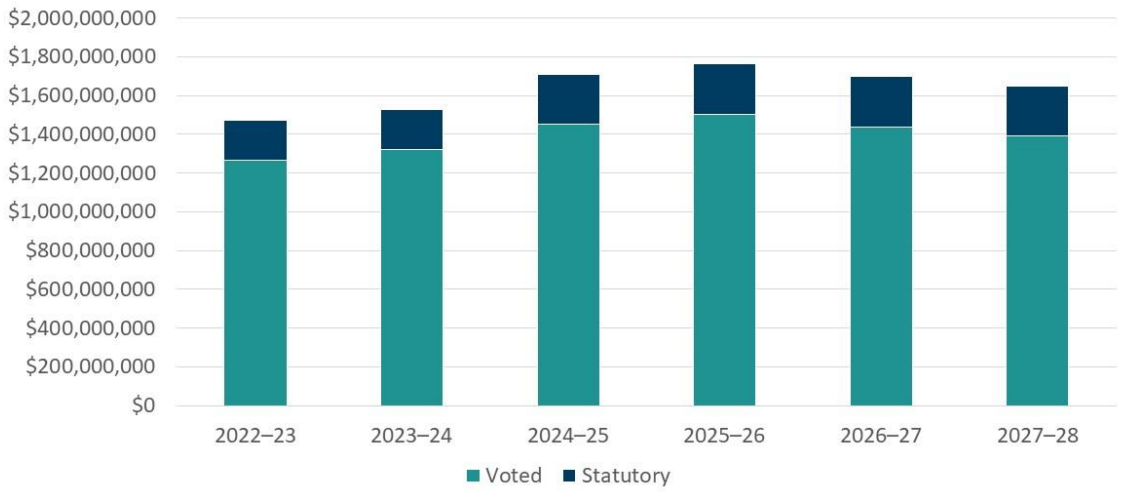
The Finances section of the Infographic for the NRC on GC Infobase offers more detailed financial information related to future years.

Funding

This section provides an overview of the department's voted and statutory funding for its core responsibilities and for internal services. Consult the Government of Canada budgets and expenditures for further information on funding authorities.

Graph 1: Approved funding (statutory and voted) over a 6-year period

Graph 1 summarizes the department's approved voted and statutory funding from 2022–23 to 2027–28.



Text version of graph 1

Graph 1 includes the following information in a bar graph:

Fiscal year	Statutory	Voted	Total
2022–23	$204,871,636	$1,265,885,342	$1,470,756,978
2023–24	$206,227,049	$1,319,753,605	$1,525,980,654
2024–25	$255,332,782	$1,452,681,288	$1,708,014,070
2025–26	$260,661,969	$1,501,516,996	$1,762,178,965
2026–27	$260,057,061	$1,436,507,931	$1,696,564,992
2027–28	$259,500,395	$1,389,336,939	$1,648,837,334

Analysis of statutory and voted funding over a 6-year period

The NRC's actual spending of $1,708.0M in 2024–25 represents an increase of $182.0M from the $1,526.0M spent in 2023–24. This increase is primarily due to increasing payroll costs and an increase in spending on Infrastructure, procurement, information management and information technology.

Actual spending of $1,708.0M in 2024–25 in comparison to planned spending of $1,595.1M represents an overall increase of $112.9M (7.0%). The variance is primarily due to funding for new programs received during the supplementary estimates, additional payroll costs including retroactive payments resulting from new collective bargaining agreements, and the transfer of SDTC funding and personnel to the NRC.

Table 9: Summary of NRC spending and year-over-year variances (dollars)

Table 9 summarizes 2024–25 spending and year-over-year variances.

Description	2024–25 Spending	Variance from 2023–24	Variance from 2022–23
Total expenditures	**1,708.0M**	**182.0M**	**237.2M**
Total operating, revenue and employee benefit plans	**908.4M**	**108.1M**	**142.9M**
Operating	653.0M	58.6M	92.3M
Statutory revenue	174.8M	40.2M	42.9M
Contributions to employee benefit plans	80.6M	9.3M	7.7M
Total grants and contributions	**639.7M**	**14.7M**	**27.4M**
NRC IRAP – firms and organizations	415.3M	-27.8M	-45.1M
TRIUMF	61.2M	1.1M	1.9M
Collaborative Science, Technology and Innovation	42.2M	2.0M	7.4M
International Astronomical Observatories Program	74.3M	37.5M	47.6M
NRC IRAP - Youth Employment and Skills Strategy	20.2M	-0.9M	0.8M
Biologics Manufacturing Centre	23.5M	4.8M	22.5M
Grants under Innovative Solutions Canada	1.5M	-2.0M	-8.0M
Other	1.5M	0.0M	0.3M
Total capital	**159.9M**	**59.2M**	**66.9M**
COVID-19 initiatives	5.8M	-4.5M	-40.3M
All other	154.1M	63.7M	107.2M

Consult the Public Accounts of Canada further information on the NRC's departmental voted and statutory expenditures.

Financial statement highlights

The NRC's Financial Statements (Audited) for the Year Ended March 31, 2025

Table 10: Condensed Statement of Operations (audited) for the year ended March 31, 2025 (dollars)

Table 10 summarizes the expenses and revenues for 2024–25 which net to the cost of operations before government funding and transfers.

Financial information	2024–25 actual results	2024–25 planned results	Difference (actual results minus planned)
Total expenses	1,645,211,000	1,526,757,000	118,454,000
Total revenues	230,914,000	184,756,000	46,158,000
Net cost of operations before government funding and transfers	1,414,297,000	1,342,001,000	72,296,000

Analysis of expenses and revenues for 2024–25

The NRC's consolidated total expenses of $1,645M represent an increase of $118M from planned results. The variance is comprised of $72M in grants and contributions, $44M in salaries and employee benefits, and $2M in other operating expenses. The increase in expenses is largely due to accounting for the consolidation of international astronomical observatories, new programming delivered by NRC IRAP supporting Artificial Intelligence (AI) and clean technology projects, NRC's share of costs related to the Employee Benefit Plan (EBP) and one-time payments provided to employees following the ratification of collective bargaining.

The NRC's consolidated total revenues of $231M represent an increase of $46M from planned results. The variance is comprised of $25M in grants and contributions revenue, $16M in research services and $5M in other revenues. The increase in revenues is primarily related to the impact of accounting for the consolidation of international astronomical observatories and growth in NRC's contracted revenues, namely with Other Government Departments (OGDs). The net cost of operations before government funding and transfers of $1,414M represents an increase of $72M from planned results.

The 2024–25 planned results information is provided in the NRC's Future-Oriented Statement of Operations and Notes 2024–25.

Table 11: Condensed Statement of Operations (audited) for 2023–24 and 2024–25 (dollars)

Table 11 summarizes actual expenses and revenues and shows the net cost of operations before government funding and transfers.

Financial information	2024–25 actual results	2023–24 actual results	Difference (2024–25 minus 2023–24)
Total expenses	1,645,211,000	1,554,745,000	90,466,000
Total revenues	230,914,000	182,665,000	48,249,000

Financial information	2024–25 actual results	2023–24 actual results	Difference (2024–25 minus 2023–24)
Net cost of operations before government funding and transfers	1,414,297,000	1,372,080,000	42,217,000

Analysis of differences in expenses and revenues between 2023-24 and 2024-25

The NRC's consolidated financial statements include the NRC and its portion of the accounts of the Canada–France–Hawaii Telescope Corporation (CFHT), TMT International Observatory LLC (TIO), and beginning in 2024–25, the Square Kilometre Array Observatory (SKAO). The NRC's relationships with CFHT, TIO and SKAO meet the definition of government partnerships under Canadian public sector accounting standards, which require that their results be proportionally consolidated within those of the NRC.

All inter-organizational balances and transactions are eliminated as part of the consolidation process. The financial statements of CFHT, TIO and SKAO for the year ending December 31, 2024, have been proportionally consolidated with the NRC's March 31 accounts.

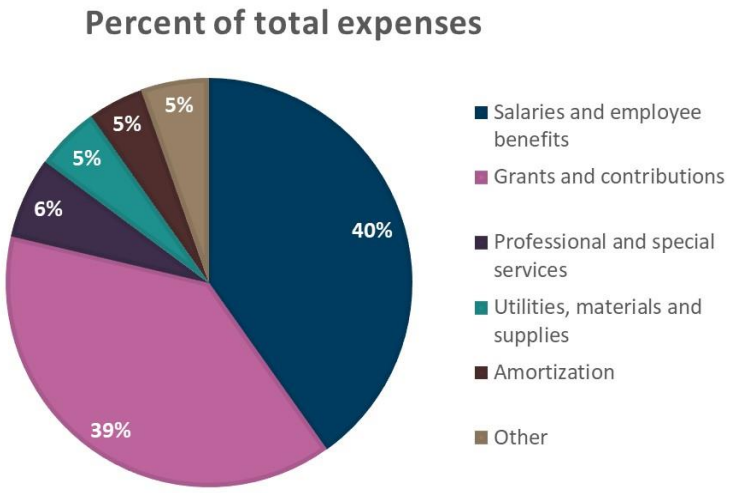
The NRC's consolidated total expenses of $1,645M in 2024–25 represent an increase of $90M from $1,555M in 2023–24. The NRC's major expense components are salaries and employee benefits ($660M) and grants and contributions ($634M), representing nearly 80% of total expenses. The $90M increase is primarily due to an increase in salaries and employee benefits of $40M, an increase in operating expenses of $32M, and an increase in grants and contributions of $19M.

The increase in salaries and employee benefits is mainly due to increased rates of pay linked to collective bargaining. The increase in other operating expenses is mainly due to a $14M increase in professional services and a $6M increase in amortization of tangible capital assets. The increase in grants and contributions is mainly due to an increase of $38M for the International Astronomical Observatories Program, offset by decreases in programs administered by the NRC Industrial Research Assistance Program (NRC IRAP).

Planned expenses, as reported in the NRC's Consolidated Future-Oriented Statement of Operations in the 2024–25 Departmental Plan were $1,527M. The variance between planned and actual results of $118M is primarily due to an increase of $72M in grants and contributions, an increase of $44M in salaries and employee benefits. The increase in grants and contributions compared to plan is mainly due to the International Astronomy Observatories Program, specifically increased contributions to SKAO.

The NRC generates revenue which can be reinvested in operations. The NRC's consolidated total revenues of $231M in 2024–25 represents an increase of $48M from 2023–24. The NRC's major revenue components were research services ($94M) and technical services ($82M), representing 77% of total revenues. The planned revenue, as reported in the NRC's Consolidated Future-Oriented Statement of Operations in the 2024.25 Departmental Plan was $185M. The increased revenue compared to plan is mainly due to increased grants and contributions revenue ($25M) and research services revenue ($16M). The proportional consolidation of SKAO was not included in the planned results, and made up $19M of the increase in grants and contributions revenue.

Graph 2: Expenses by type (2024–25)

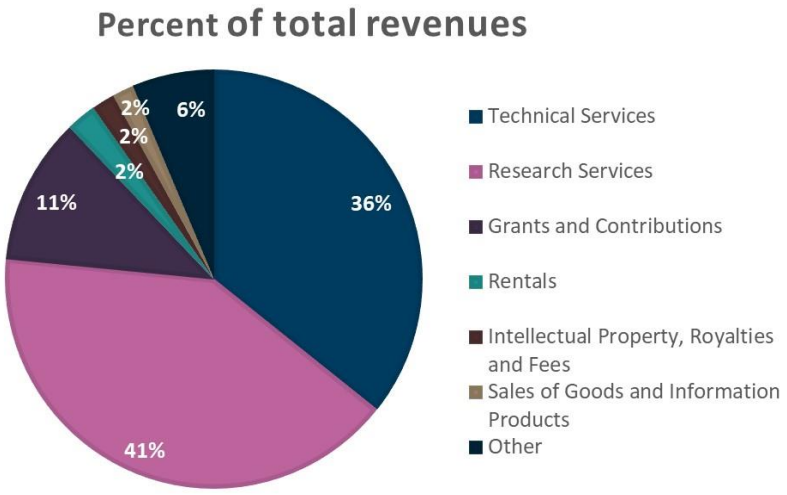


Text version of graph 2

Graph 2 includes the following information in a pie chart:

Type	Percent of total expenses 2024-25
Salaries and employee benefits	40%
Grants and contributions	39%
Professional and special services	6%
Utilities, materials and supplies	5%
Amortization	4%
Other	5%

Graph 3: Revenues by type (2024–25)



Text version of graph 3

Graph 3 includes the following information in a pie chart:

Type	Percent of total revenues 2024-25
Technical services	36%
Research services	41%
Grants and contributions	11%
Rentals	2%
Intellectual property, royalties and fees	2%
Sales of goods and information products	2%
Other	6%

Table 12 Condensed Statement of Financial Position (audited) as at March 31, 2025 (dollars)

Table 12 provides a brief snapshot of the amounts the department owes or must spend (liabilities) and its available resources (assets), which helps to indicate its ability to carry out programs and services.

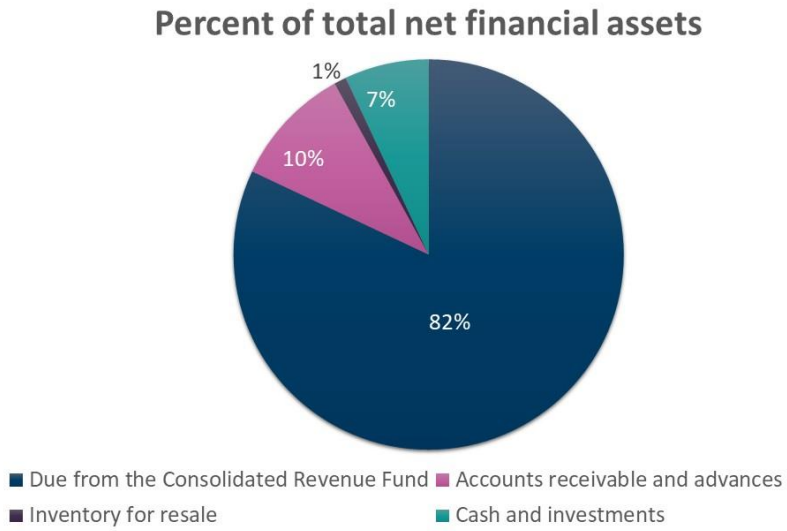
Financial information	Actual fiscal year (2024–25)	Previous fiscal year (2023–24)	Difference (2024–25 minus 2023–24)
Total net liabilities	537,703,000	455,369,000	82,334,000
Total net financial assets	380,287,000	378,612,000	1,675,000
Departmental net debt	157,416,000	76,757,000	80,659,000

Financial information	Actual fiscal year (2024–25)	Previous fiscal year (2023–24)	Difference (2024–25 minus 2023–24)
Total non-financial assets	1,095,288,000	955,527,000	139,761,000
Departmental net financial position	1,252,704,000	1,032,284,000	220,420,000

The NRC's consolidated net financial assets totalled $538M as at March 31, 2025, an increase of $82M from the March 31, 2024 balance of $455M. The balance is made up of the Due from the Consolidated Revenue Fund (CRF), accounts receivable, inventory for resale and cash and investments. The increase is primarily due to an increase of $46M in the Due from the CRF and an increase of $27M in cash and investments from the proportionally consolidated accounts of CFHT, TIO and SKAO.

The NRC's consolidated liabilities consist of accounts payable and accrued liabilities, vacation and compensatory leave, lease inducements, deferred revenues, employee future benefits and asset retirement obligations. The balance as at March 31, 2025 of $380M represents a $2M increase from the March 31, 2024 balance.

Graph 4: Net financial assets as at March 31, 2025



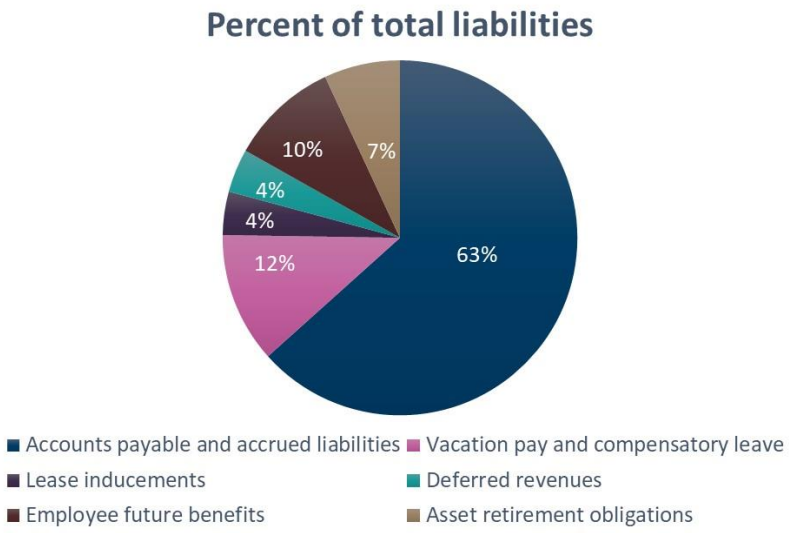
Text version of graph 4

Graph 4 includes the following information in a pie chart:

Type	Percent of total net financial assets 2024-25
Due from consolidated revenue fund	82%
Accounts receivables and advances	10%

Inventory for resale	1%
Cash and investments	7%

Graph 5: Liabilities as at March 31, 2025



Text version of graph 5

Graph 5 includes the following information in a pie chart:

Type	Percent of total liabilities 2024-25
Accounts payable and accrued liabilities	63%
Vacation pay and compensatory leave	12%
Lease inducements	4%
Deferred revenues	4%
Employee future benefits	10%
Asset retirement obligations	7%

Human resources

This section presents an overview of the department's actual and planned human resources from 2022–23 to 2027–28.

Table 13: Actual human resources for core responsibilities and internal services

Table 13 shows a summary in full-time equivalents of human resources for the NRC's core responsibilities and for its internal services for the previous 3 fiscal years.

Core responsibilities and internal services	2022–23 actual full-time equivalents	2023–24 actual full-time equivalents	2024–25 actual full-time equivalents
Science and innovation	3,300.8	3,263.3	3,402.7
Internal services	962.5	1,059.9	1,102.0
Total	**4,263.3**	**4,323.2**	**4,504.7**

Table 14: Analysis of human resources for the last 3 years

Table 14 shows a summary in full-time equivalents of human resources for the NRC's program areas for the previous 3 fiscal years.

Description	Variance from 2022–23	Variance from 2023–24	2024–25 FTEs
R&D FTEs	79.4	62.8	2,711.7
NRC IRAP FTEs	41.1	34.8	503.4
Internal services and enabling services FTEs	121.0	83.8	1,289.6
Total NRC FTEs	**241.5**	**181.4**	**4,504.7**

The NRC's actual 2024–25 FTEs (4,504.7) increased by 181.5 full-time equivalents (FTEs) (4.2%) when compared to 2023–24 (4,323.2). A significant portion of this increase is related to increased FTEs within procurement, information management and information technology groups. There were also increases within NRC IRAP and several research centres that received funding for new programs.

Table 15: Human resources planning summary for core responsibilities and internal services

Table 15 shows the planned full-time equivalents for each of the NRC's core responsibilities and for its internal services for the next 3 years. Human resources for the current fiscal year are forecast based on year to date.

Core responsibilities and internal services	2025–26 planned full-time equivalents	2026–27 planned full-time equivalents	2027–28 planned full-time equivalents
Science and innovation	3,411.0	3,411.0	3,411.0
Internal services	1,066.2	1,066.2	1,066.2
Total	**4,477.2**	**4,477.2**	**4,477.2**

Analysis of human resources for the next 3 years

Planned FTE levels are similar to actual FTEs in 2024–25.

Supplementary information tables

The following supplementary information tables are available on the NRC's website:

- Details on transfer payment programs
- Gender-based Analysis Plus
- Response to parliamentary committees and external audits

Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the Report on Federal Tax Expenditures.

This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs as well as evaluations and GBA Plus of tax expenditures.

Corporate information

Departmental profile

Appropriate minister: The Honourable Mélanie Joly, P.C., M.P., Minister of Industry and Minister responsible for Canada Economic Development for Quebec Regions

Institutional head: Mitch Davies

Ministerial portfolio: Innovation, Science and Economic Development

Enabling instrument: *National Research Council Act*, R.S.C. 1985, c. N-15

Year of incorporation / commencement: 1916

Other:

The NRC is a departmental corporation of the Government of Canada, reporting to Parliament through the Minister of Industry. The NRC works in partnership with members of the Innovation, Science and Economic Development Portfolio to leverage complementary resources to promote research and integrated innovation, exploit synergies in key scientific and technological areas, promote SME growth and contribute to Canadian economic growth.

The NRC's Council provides independent strategic advice to the NRC president and reviews organizational performance. The president provides leadership and strategic management and is responsible achieving the NRC's long-range goals and plans in alignment with government priorities.

Each of the NRC's vice-presidents is responsible for a number of areas composed of programs and research initiatives, research centres, the NRC Industrial Research Assistance Program and/or a corporate branch. Vice-presidents and NRC managers are responsible for executing plans and priorities to support successful achievement of objectives.

Departmental contact information

Mailing address:

National Research Council Canada
1200 Montreal Road,
Building M-58
Ottawa, Ontario, Canada K1A 0R6

Telephone: 613-993-9101 or toll-free 1-877-NRC-CNRC (1-877-672-2672)

Fax: 613-991-9096

Email: info@nrc-cnrc.gc.ca

Website: nrc.canada.ca

Definitions

appropriation (crédit)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (dépenses budgétaires)

Operating and capital expenditures; transfer payments to other levels of government, departments or individuals; and payments to Crown corporations.

core responsibility (responsabilité essentielle)

An enduring function or role of a department. The departmental results listed for a core responsibility reflect the outcomes that the department seeks to influence or achieve.

Departmental Plan (plan ministériel)

A report that outlines the anticipated activities and expected performance of an appropriated department over a 3-year period. Departmental Plans are usually tabled in Parliament in spring.

departmental priority (priorité)

A plan, project or activity that a department focuses and reports on during a specific planning period. Priorities represent the most important things to be done or those to be addressed first to help achieve the desired departmental results.

departmental result (résultat ministériel)

A high-level outcome related to the core responsibilities of a department.

departmental result indicator (indicateur de résultat ministériel)

A quantitative or qualitative measure that assesses progress toward a departmental result.

departmental results framework (cadre ministériel des résultats)

A framework that connects the department's core responsibilities to its departmental results and departmental result indicators.

Departmental Results Report (rapport sur les résultats ministériels)

A report outlining a department's accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

Full-time equivalent (équivalent temps plein)

Measures the person years in a departmental budget. An employee's scheduled hours per week divided by the employer's hours for a full-time workweek calculates a full-time equivalent. For example, an employee who works 20 hours in a 40-hour standard workweek represents a 0.5 full-time equivalent.

Gender-based Analysis Plus (GBA Plus) (analyse comparative entre les sexes plus [ACS Plus])

An analytical tool that helps to understand the ways diverse individuals experience policies, programs and other initiatives. Applying GBA Plus to policies, programs and other initiatives helps to identify the

different needs of the people affected, the ways to be more responsive and inclusive and the methods to anticipate and mitigate potential barriers to accessing or benefitting from the initiative. GBA Plus goes beyond biological (sex) and socio-cultural (gender) differences to consider other factors, such as age, disability, education, ethnicity, economic status, geography (including rurality), language, race, religion and sexual orientation.

government priorities (priorités pangouvernementales)

For the purpose of the 2024–25 Departmental Results Report, government priorities are the high-level themes outlining the government's agenda as announced in the most recent Speech from the Throne.

horizontal initiative (initiative horizontale)

A program, project or other initiative where two or more federal departments receive funding to work collaboratively on a shared outcome usually linked to a government priority, and where the ministers involved agree to designate it as horizontal. Specific reporting requirements apply, including that the lead department must report on combined expenditures and results.

Indigenous business (entreprise autochtones)

For the purposes of a Departmental Result Report, this includes any entity that meets the Indigenous Services Canada's criteria of being owned and operated by Elders, band and tribal councils, registered in the Indigenous Business Directory or registered on a modern treaty beneficiary business list.

non-budgetary expenditures (dépenses non budgétaires)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (rendement)

What a department did with its resources to achieve its results, how well those results compare to what the department intended to achieve, and how well lessons learned have been identified.

performance indicator (indicateur de rendement)

A qualitative or quantitative measure that assesses progress toward a departmental-level or program-level result, or the expected outputs or outcomes of a program, policy or initiative.

plan (plan)

The articulation of strategic choices, which provides information on how a department intends to achieve its priorities and associated results. Generally, a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead to the expected result.

planned spending (dépenses prévues)

For Departmental Plans and Departmental Results Reports, planned spending refers to the amounts presented in Main Estimates. Departments must determine their planned spending and be able to defend the financial numbers presented in their Departmental Plans and Departmental Results Reports.

program (programme)

An individual, group, or combination of services and activities managed together within a department and focused on a specific set of outputs, outcomes or service levels.

program inventory (répertoire des programmes)

A listing that identifies all the department's programs and the resources that contribute to delivering on the department's core responsibilities and achieving its results.

result (résultat)

An outcome or output related to the activities of a department, policy, program or initiative.

statutory expenditures (dépenses législatives)

Spending approved through legislation passed in Parliament, other than appropriation acts. The legislation sets out the purpose and the terms and conditions of the expenditures.

target (cible)

A quantitative or qualitative, measurable goal that a department, program or initiative plans to achieve within a specified time period.

voted expenditures (dépenses votées)

Spending approved annually through an appropriation act passed in Parliament. The vote also outlines the conditions that govern the spending.

Supplementary Information Tables: 2024–25 Departmental Results Report

Table of contents

Details on transfer payment programs

Assessed Contribution to the Bureau International des Poids et Mesures (BIPM)

Start date: Canada signed the Metre Convention and became a member state of the BIPM in 1907

End date: Ongoing

Type of transfer payment: Contributions

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2018–19

Link to departmental results:

- Scientific and technological knowledge advances
- Innovative businesses grow
- Evidence-based solutions inform decisions in government priority areas

Link to the department's program inventory: Metrology

Purpose and objectives of transfer payment program: The assessed contribution to the BIPM is an obligation accepted by Canada as a signatory to the international treaty known as the Metre Convention. By representing Canada on the international metrology stage through its affiliation with the BIPM and associated regional metrology organization *Sistema Interamericano de Metrología* (SIM), the NRC can effectively and efficiently respond to its mandated responsibility for maintenance of national measurement standards, as articulated in the *NRC Act* and the *Weights and Measures Act*.

Results achieved: By maintaining international recognition in measurement science through its interactions with the BIPM and SIM, the NRC continues to provide metrology research and services that help transform ideas into market-ready technologies that benefit Canadian society, the economy and the environment.

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—evaluation of Metrology Program completed in 2021–22.

Engagement of applicants and recipients in 2024–25: In 2024–25, engagement with the Quality System Task Force (QSTF) of the *Sistema Interamericano de Metrología* (SIM), our regional metrology organization, resulted in the approval of the NRC's Quality Management System (QMS), supporting its internationally recognized Calibration and Measurement Capabilities (CMCs) in Mass, density and volume and in Electrical Power Measurements. In addition, international peer reviews of our facilities and capabilities for

our Ionizing Radiation Standards calibrations, Organic Chemical Metrology and Inorganic Chemical Metrology certified reference material production and certification, and our Glow Discharge Mass Spectrometry analysis were successfully completed, in time for presentation at the SIM QSTF in fiscal year 2025–2026. Other engagement was the improvement and/or addition of CMCs in the key comparison database of the BIPM in the areas of Length, Thermometry and Inorganic Chemistry.

Financial information (dollars): Assessed Contribution to the Bureau International des Poids et Mesures (BIPM)

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	-	-	-	-	-	-
Total contributions	628,833	638,795	659,000	685,782	685,782	26,782
Total program	628,833	638,795	659,000	685,782	685,782	26,782

Explanation of variances

Variance is immaterial.

Biologics Manufacturing Centre (BMC)

Start date: April 2023

End date: March 2033

Type of transfer payment: Contributions

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2022–23

Link to departmental results:

- Innovative businesses grow
- Evidence-based solutions inform decisions in government priority areas

Link to the department's program inventory: Biologics Manufacturing Centre

Purpose and objectives of transfer payment program: The Biologics Manufacturing Centre is an end-to-end Good Manufacturing Practices (GMP) biomanufacturing facility located on the NRC's Royalmount campus. Unique to Canada, this biomanufacturing facility was built to fulfil a public-good mandate—to produce biologics that would not otherwise be available for Canadians and to pivot during a public health emergency to produce cell-based vaccines or other drugs needed to keep Canadians safe.

The facility is operated by Biologics Manufacturing Centre (BMC) Inc., a not-for-profit corporation, with its own board of directors and management team to oversee the corporation and its public-good mandate.

The NRC plays an important oversight and stewardship role on behalf of the Government of Canada. The NRC continues to own the infrastructure and acts as lessor of building and equipment to Biologics Manufacturing Centre (BMC) Inc. The NRC also provides annual funding through a 10-year contribution agreement to ensure the facility is maintained in a GMP-readiness state and prepared to respond to public health emergencies in Canada.

The recipient is not required to repay funds obtained under this transfer payment program.

Results achieved: Biologics Manufacturing Centre (BMC) Inc. continues to meet its obligations under the funding and lease agreements.

The facility is fully operational, Good Manufacturing Practices (GMP)-compliant, and ready to pivot during a public health emergency to produce vaccines, biologics or other therapeutics for Canadians.

Biologics Manufacturing Centre (BMC) Inc. is actively engaged in Canada's biomanufacturing and life sciences sector, regularly participating in major events in the ecosystem, sharing knowledge about GMP production, and raising awareness about the BMC's public-good

mandate, production capabilities and service offerings. Its business development campaign has resulted in additional clients across a range of services.

Joint NRC-BMC oversight committees continue to meet on a regular basis, ensuring smooth management of the funding and lease agreements.

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—evaluation of BMC completed in 2023–24.

Engagement of applicants and recipients in 2024–25: Joint committees co-chaired by the NRC and Biologics Manufacturing Centre (BMC) Inc. facilitate effective functioning of the lease and contribution agreements and collaboration between the two organizations. A Site Coordination Board ensures smooth management of the Lease Agreement and coordination of activities between the NRC and Biologics Manufacturing Centre (BMC) Inc., while a Facilitation Committee provides a forum to address any issues that may arise under the agreements and negotiate resolutions to any disputes. These committees meet on a quarterly basis.

Reporting requirements set out in the lease and contribution agreements provide regular and ongoing engagement with Biologics Manufacturing Centre (BMC) Inc., including quarterly financial forecasting and reporting, as well as key business documents.

The NRC serves as an observer to the Biologics Manufacturing Centre (BMC) Inc. Board of Directors.

Financial information (dollars): Biologics Manufacturing Centre (BMC)

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	-	-	-	-	-	-
Total contributions	975,300	18,724,700	17,000,000	23,500,000	23,500,000	6,500,000
Total program	975,300	18,724,700	17,000,000	23,500,000	23,500,000	6,500,000

Explanation of variances

The variance is mainly due to the transfer of funds from the Public Health Agency of Canada to the National Research Council of Canada to support Canadian biologics manufacturing.

Collaborative Science, Technology and Innovation Program (CSTIP)

Start date: April 2018

End date: Ongoing

Type of transfer payment: Grants and contributions

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2018–19

Link to departmental results:

- Scientific and technological knowledge advances
- Innovative businesses grow
- Evidence-based solutions inform decisions in government priority areas

Link to the department's program inventory: Collaborative Science, Technology and Innovation Program

Purpose and objectives of transfer payment program: Provides grant and contribution funding for external collaborators with complementary capabilities, e.g., small and medium-sized enterprises (SMEs), postsecondary institutions and non-profit research organizations. The program comprises the following elements:

1. NRC collaborative R&D initiatives: Funding of external collaborators working with NRC researchers on projects that make up a series of large-scale collaborative R&D programs in priority areas
2. Ideation Fund: Funding of external collaborators working with NRC personnel to encourage, test and validate transformative self-directed, exploratory research ideas
3. Outreach initiative: Funding to support conferences, workshops, symposia or other outreach initiatives, in order to promote engagement of Canadians, particularly those in under-represented groups, interested in STEM

Results achieved:

- In 2024–25, 694 active collaborative funding agreements were managed across 13 Challenge programs, 5 Cluster Support programs, the Ideation Fund (New Beginnings and Small Teams), and Outreach Initiative
- NRC-CSTIP established 157 new collaborative funding agreements across various sectors, including 47 in Climate and Sustainability, 46 in Artificial Intelligence and Quantum technologies, 19 in Health and Life Sciences
    - In addition, 45 agreements advanced foundational collaborative research spanning all sectors, and 21 outreach agreements strengthened engagement and

collaboration

- $11M of CSTIP funding was provided to 23 innovative Small to Medium Enterprises to strengthen the support for business innovation through collaboration with the NRC

To date, the NRC has provided funding through 1194 collaborative research agreements and committed over $241 million in funding through CSTIP.

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—evaluation of CSTIP completed in 2023-24.

Engagement of applicants and recipients in 2024–25: There were 5 open calls for proposals issued across Challenge programs and initiatives in 2024–25. This included a joint call with NSERC in support of the National Quantum Strategy.

Open calls within the NRC resulted in 40 New Beginnings and 2 Small Teams projects being selected for funding with external research collaborators.

In 2024–25, the NRC funded 42 new unique collaborators through CSTIP, bringing the total number of unique collaborators since the program's inception to 294. Partnerships with collaborative partners in both private and public sectors, academic and other research organizations, both in Canada and internationally, were maintained through 13 Challenge programs and initiatives, 5 Cluster Support programs and the Ideation Fund in 2024–25.

Financial information (dollars): Collaborative Science, Technology and Innovation Program (CSTIP)

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	28,592,497	35,309,999	37,397,053	36,623,992	36,623,992	(773,061)
Total contributions	6,165,894	4,888,633	6,875,000	6,043,113	5,591,835	(1,283,165)
Total program	34,758,390	40,198,632	44,272,053	42,667,105	42,215,827	(2,056,226)

Explanation of variances

Variance is immaterial.

National Research Council of Canada Industrial Research Assistance Program (NRC IRAP)

Start date: April 1965 (original program start date)

End date: Ongoing

Type of transfer payment: Contributions

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2023–24

Link to departmental results: Innovative businesses grow

Link to the department's program inventory: Industrial Research Assistance Program

Purpose and objectives of transfer payment program: The program contributes to the growth and prosperity of Canadian SMEs by stimulating innovation, adoption or commercialization of technology-based products, services or processes in Canada. This is done through:

1. technical and related business advice and connections facilitated by a cross-Canada network of field professional staff
2. cost-shared merit-based contributions to R&D and technology innovation project activities
3. contributions supporting employment of post-secondary graduates

Funding is available through different types including Contributions to Firms and Contributions to Organizations.

NRC IRAP also supports the placement of graduates within innovative SMEs through its participation in the delivery of the Youth Employment Program sponsored by Employment and Social Development Canada's Youth Employment and Skills Strategy.

The program contains broad flexibilities to reflect the different needs and realities of a variety of recipients from various industry sectors. This includes non-repayable contributions under appropriate circumstances where the benefits to Canada would be significant, and in keeping with international obligations. In 2025–26, NRC IRAP will also encompass sustainable development technology programming following the transition of Sustainable Development Technology Canada.

Results achieved:

- In 2024–25, NRC IRAP helped Canadian SMEs to innovate and compete internationally, working with 9,187 firms, creating 23,208 jobs and providing 28,129 advisory services
- NRC IRAP delivered $393.1 million in funding to 3,136 innovative SMEs, supporting the execution of 4,371 projects in different areas of innovation
- NRC IRAP also provided $27.4 million in funding to 81 not-for-profit organizations and

educational institutions in Canada's innovation ecosystem to deliver unique expertise and services that help SMEs to advance innovation

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25:

- In 2024–25, the NRC completed an evaluation of the NRC IRAP's Intellectual Property (IP) Assist initiative
    - IP Assist was launched in 2021–22 to support innovative small and medium-sized enterprises with grants and contributions funding and advisory services
- NRC effectively delivered an IP support program that stakeholders generally found excellent and valuable
    - The initiative improved IP literacy among clients, enabling them to better manage their IP and leverage their innovations to gain a competitive advantage
- To inform future time-limited initiatives, the evaluation identified lessons learned from IP Assist related to program design, delivery and implementation
    - Lessons included, for example, that the use of hybrid delivery model with third parties significantly enhanced the effectiveness and efficiency of IP Assist

Engagement of applicants and recipients in 2024–25: NRC IRAP is a national program managed on a regional basis with 275 Industrial Technology Advisors (ITAs), located in 128 points of service across the country (as of the end of 2024–25). Through their vast expertise and experience, ITAs provide customized advice to growth-oriented technologically innovative SMEs. These ITAs engage with firms over a period of time, creating a plan to work with the firm to support their capacity for innovation and growth. Support may be in the form of advisory services or financial support for innovative projects.

At the end of their funded project, recipients complete a post-project report. This report captures information on the recipient's experience with NRC IRAP and, along with published service standards, is used by the program to continuously improve.

Financial information (dollars): National Research Council of Canada Industrial Research Assistance Program (NRC IRAP)

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	-	-	-	-	-	-
Total contributions	479,815,375	464,240,615	410,400,600	436,771,554	435,552,650	25,152,050
Total program	479,815,375	464,240,615	410,400,600	436,771,554	435,552,650	25,152,050

Explanation of variances

The variance is mainly due to the transfer of Sustainable Development Technology Canada employees and programming to the National Research Council of Canada.

Innovative Solutions Canada (ISC)

Start date: December 2017

End date: Ongoing

Type of transfer payment: Grant

Type of appropriation: Estimates

Fiscal year for terms and conditions: The NRC received authority for the ISED-led terms and conditions for Innovative Solutions Canada (ISC) grants in 2017–18 (January 2018).

Link to departmental results: ISC is an ISED-led program, with the NRC as 1 of 21 federal departments mandated to participate. Program results will be reported by ISED.

Link to the department's program inventory: Within the NRC, this ISED-led program is administered by NRC IRAP.

Purpose and objectives of transfer payment program: ISC is a grant and procurement program that enables participating departments and agencies to support the scale-up of Canadian small and medium-sized enterprises through early-stage, pre-commercial R&D. The program allocates a portion of departmental funding to:

- fuel the development and adoption of technological innovation in Canada
- grow Canadian companies through direct funding to support early stage, pre-commercial R&D, late-stage prototypes, and to accelerate commercialization
- encourage companies led by equity deserving groups, such as women, Indigenous peoples, youth, racialized persons, persons with disabilities, 2SLGBTQ+ and others
- foster greater industry-research collaboration through the release of challenges for solutions that address key Government of Canada priorities
- provide federal departments and agencies with opportunities to develop new capabilities to meet their R&D needs and thereby advance government priorities

Results achieved:

- NRC-ISC allocated $3.5 million, including $2 million to contracts for 13 projects and $1.5 million to grants for 6 projects
    - This effective financial management ensured that the majority of the allocated funds directly supported innovation and research initiatives
- NRC-ISC managed 7 challenges, focusing on climate action and sustainability, health and biomanufacturing, and quantum and digital technology solutions

    - These initiatives were designed to contribute to scientific and technological advancements, aiding innovative businesses in growth and scaling up, thus fulfilling NRC IRAP objectives
- Collaboration was a key element of NRC-ISC's approach, involving partnerships with 9 NRC research centres and 5 other government departments (ISED, PSPC, HC, NRCan and ECCC)

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—this is an ISED-led program.

Engagement of applicants and recipients in 2024–25: NRC-ISC collaborates with NRC research centres and NRC IRAP to create and launch ISC challenges. As 1 of 21 participating federal government departments, it submits these challenges to ISED for posting. The NRC-ISC further collaborates with the same stakeholders to assess and select applicant proposals for funding. This effort ensures that only the most promising and innovative projects receive financial support.

Funding is provided to innovative Canadian SMEs through grants or contracts issued for various stages of project development, from proof of feasibility to prototype development. Grant recipients are required to produce monthly reports and meet regularly with the challenge or technical lead and an NRC-ISC program advisor for updates and guidance. Contract recipients meet with the challenge or technical lead to ensure deliverables meet the criteria outlined in their contract. This process culminates in a final technical report and the delivery of a prototype to the sponsoring NRC research centre.

Financial information (dollars): Innovative Solutions Canada (ISC)

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	9,566,552	3,523,509	5,500,000	1,454,757	1,454,755	(4,045,245)
Total contributions	-	-	-	-	-	-
Total program	9,566,552	3,523,509	5,500,000	1,454,757	1,454,755	(4,045,245)

Explanation of variances

Variance due to conversion of funds to operating dollars for the program for R&D contracts.

International Affiliations Program

Start date: 1958

End date: Ongoing

Type of transfer payment: Grant

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2011–12

Link to departmental results: Scientific and technological knowledge advances

Link to the department's program inventory: International Affiliations

Purpose and objectives of transfer payment program: Canada's membership in international science and technology organizations promotes international research and innovation, networking, advocacy, leadership opportunities as well as access to benchmarking possibilities, enabling Canadian science, technology, and industry to remain competitive.

Results achieved:

- Enhanced Canada's international visibility by engaging in strategic discussions with additional organizations during the International Science Council (ISC) Annual General Assembly in Muscat, Oman, in January 2025, and by making meaningful contributions to the development of new ISC procedures
- Facilitated the development of Canadian leaders in science, technology and innovation by leveraging opportunities from ISC, with an emphasis on leadership growth and the implementation of equity, diversity and inclusion (EDI) strategies
- Expanded market-oriented innovation opportunities for Canadian SMEs and boosted export growth via global value chains
    - As co-chair of the Eureka network, the NRC highlighted Canada's expertise and paved the way for Canadian companies to access international networks, accelerating market introduction of their innovative products and services

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—evaluation completed in 2020–21.

Engagement of applicants and recipients in 2024–25:

- Ongoing engagement with representatives from all Canadian National Committees (CNCs) to strengthen connections and gather crucial information for the program
    - Continuous dialogue helped the NRC better understand CNCs' evolving priorities, valued program benefits and needs concerning international affiliations while also

assessing CNCs' desired international participation and engaging potential applicants

- An advisory committee has met over the past 6 fiscal years to leverage the expertise from government science departments and agencies, aiming to coordinate and enhance Canadian international science objectives
    - Ongoing engagement ensures effective coordination
- Engagements with international affiliations management have intensified, focusing on impact assessment and future planning
    - Ongoing engagement includes the completion of an annual reporting questionnaire

Financial information (dollars): International Affiliations Program

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	609,608	893,633	773,400	773,400	773,311	(89)
Total contributions	-	-	-	-	-	-
Total program	609,608	893,633	773,400	773,400	773,311	(89)

Explanation of variances

Variance is immaterial.

International Astronomical Observatories Program

Start date: 1978

End date: Ongoing

Type of transfer payment: Contribution

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2023–24

Link to departmental results:

- Scientific and technological knowledge advances
- Innovative businesses grow
- Evidence-based solutions inform decisions in government priority areas

Link to the department's program inventory: Herzberg Astronomy and Astrophysics

Purpose and objectives of transfer payment program: Astronomy is a global science. The increasing cost of leading-edge observatories and the scarcity of ideal observation sites have led to a greater focus on international collaboration for large-scale astronomy projects that lead to advances in knowledge and understanding of the universe.

The NRC, in collaboration with other international bodies, provides financial contributions to support the management and operations of offshore ground-based observatories and their related facilities, including the Canada–France–Hawaii Telescope, the twin telescopes of the Gemini Observatory, the Atacama Large Millimetre-submillimetre Array, the Thirty Meter Telescope, and the Square Kilometre Array Observatory (SKAO). The NRC participates in the oversight and direction of these facilities and their research capabilities. In April 2024, Canada became the 10th member of the SKAO intergovernmental organisation.

International agreements governing these observatories are long-term commitments that specify contributions to support preconstruction design and development, construction, operation and maintenance, capital improvements (e.g., development of new astronomical instruments and other facility upgrades) and decommissioning of the international ground-based observatories and their related facilities. These agreements also include commitments to support the university-based user communities to ensure a fair and progressive use of these observatories.

The NRC participates in the governance of these international facilities on behalf of the Canadian astronomy research community and provides support, including management of observing-time allocation, advanced data management services, and instrumentation. Through the NRC's financial and in-kind contributions, the Canadian astronomy community is assured merit-based access to these facilities.

Recipients are not required to repay funds obtained under this transfer payment program.

Results achieved: Canada's membership in the SKA Observatory (SKAO), guarantees access for Canadian astronomers to the 2 most advanced radio-telescopes in the world. Membership in the SKAO also provides opportunities for Canadian industry. Using technology developed by the NRC, Canadian companies are building key components for the telescopes. The NRC represents Canada in the governance of the SKAO, adding to its suite of observatories and giving Canadian astronomers opportunities to transform our understanding of the universe.

As a member of the Gemini Observatory, Canada, through the NRC, has partnered with the University of Toronto and other Canadian universities to design and build the Gemini InfraRed Multi-Object Spectrograph (GIRMOS). The NRC is responsible for the infrared imager, the instrument software and the object selection system. The team recently passed the critical design review stage where an international panel of experts evaluated the project's readiness to start construction. GIRMOS will utilize the object selection system, working in tandem with an adaptive optics system, to simultaneously feed multiple objects to the spectrographs. The imager observes the whole field of view in parallel with the spectrographs, making the instrument well-suited for studying the formation and evolution of galaxies, as astronomers look back to a time in the universe when galaxies were first forming.

Low noise amplifiers (LNAs) are also essential to radio astronomy; they magnify weak radio signals from celestial objects, improving the signal to noise ratio and enabling the detection and analysis of these signals. The NRC designed and developed LNAs for the SKA that are highly sensitive and several times better than any previous LNAs. Now that technology has been shared with industry and a Canadian company is producing all the LNAs needed for the SKA-Mid array in South Africa's Karoo region.

Using its expertise in instrument development, the NRC is providing a key component to the Cosmological Advanced Survey Telescope for Optical and Ultraviolet Research, a proposed mission that is a key priority for Canadian astronomers

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—evaluation completed in 2021–22.

Engagement of applicants and recipients in 2024–25: The NRC manages ground-based observatories established or maintained by the Government of Canada for the benefit of the Canadian astronomy research community, aligning its contributions to the priorities of the community's Long-Range Plan for Astronomy and Astrophysics. The NRC participates on the Boards which oversee the observatories to ensure that the science directions and programs of the facilities reflect Canadian strengths and interests. In addition, the NRC ensures these activities increase opportunities for Canadian researchers and firms to develop relevant instrumentation for the observatories.

To carry out its roles effectively, the NRC provides current information about each observatory to research community-based committees of scientists, which provide expert advice on observatory operations and development. The NRC provides extensive support to the user community through numerous services extending from administering the time allocation process for

Canadian researchers through to delivery of science-ready data (through its Canadian Astronomy Data Centre).

Financial information (dollars): International Astronomical Observatories Program

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	-	-	-	-	-	-
Total contributions	26,647,172	36,692,788	70,895,511	74,347,684	74,347,684	3,452,173
Total program	26,647,172	36,692,788	70,895,511	74,347,684	74,347,684	3,452,173

Explanation of variances

Increase in actual spending from planned spending mainly due to foreign exchange costs as the majority of payments made under this program are completed in a foreign denomination.

TRIUMF

Start date: 1977

End date: Ongoing

Type of transfer payment: Contribution

Type of appropriation: Estimates

Fiscal year for terms and conditions: 2024–25

Link to departmental results:

- Scientific and technological knowledge advances
- Innovative businesses grow
- Evidence-based solutions inform decisions in government priority areas

Link to the department's program inventory: TRIUMF

Purpose and objectives of transfer payment program: TRIUMF is Canada's particle accelerator centre. The laboratory is one of Canada's key investments in large-scale research infrastructure. It provides world-class facilities for research in particle and nuclear physics, accelerator science, life sciences and materials science. An incorporated non-profit with charitable status, TRIUMF Inc. is a consortium of 21 Canadian universities, with its core operations funded via 5-year contribution agreements through the NRC. TRIUMF Inc. has its own governance structure through the member universities and a management team that operate and manage TRIUMF Inc. The NRC plays an important oversight and stewardship role on behalf of the Government of Canada. The NRC, however, is not directly involved in designing and running the organization's operations.

TRIUMF is the single program funding recipient and is not required to repay funds obtained under this transfer payment program.

Results achieved:

- TRIUMF contributed to 361 scientific publications in scientific journals, trained 315 highly qualified personnel, including undergraduate and graduate students as well as post-doctoral researchers, and hosted 614 scientific visitors and users, over 300 of which came from international institutions
- Installation of the beamline and target hall shielding is well underway for the ARIEL project and the target ion source front end design was completed over the last year
- TRIUMF completed the first phase of the Institute for Advanced Medical Isotopes, a dedicated life sciences facility that will significantly increase Canada's competitive advantage in medical isotope research, development and production
    - In 2023–24, building and equipment commissioning was completed for the facility,

and additional funding from the Government of British Columbia was confirmed for the build-out of remaining space within the laboratory to maximize output for provincial and national stakeholders

- The first result from the ALPHA-g experiment was published in Nature
    - The ALPHA-Canada team, led by TRIUMF, observed for the first time, the effect of gravitational free-fall of antihydrogen, establishing that antimatter falls down and rejecting a speculation that it might fall up
    - The result attracted international attention in the scientific community and was widely reported in the media
- TRIUMF Innovations, the commercialization arm of TRIUMF and a national co-lead for the Canadian Medical Isotope Ecosystem program, successfully launched a $5 million call for proposals to support the development and commercialization of the next generation of medical isotope innovations in Canada
- ARTMS Inc., a TRIUMF spin-off medical isotope company, has successfully scaled up since it was founded in 2016, and in 2024, ARTMS was acquired by Telix Pharmaceuticals Limited for US$82 million
- TRIUMF's Life Sciences Program advanced its mandate under the $24 million New Frontiers in Research Fund - Transformations Grant initiative
    - Leveraging the laboratory's accelerator complex and radiochemistry expertise, the team is producing several alpha-, beta-, and Auger-emitting radionuclides, along with several novel metal chelates for pre-clinical theranostics radiopharmaceutical development and testing
- In partnership with BWXT Medical, TRIUMF produced a rare cancer-fighting isotope for clinical trials in the treatment of advanced prostate cancer at Canadian trial centers in Montreal and Vancouver

Findings of audits completed in 2024–25: Not applicable

Findings of evaluations completed in 2024–25: Not applicable—evaluation completed in 2023–24.

Engagement of applicants and recipients in 2024–25:

- The NRC chairs the Agency Committee on TRIUMF (ACT), which includes the federal agencies that fund and oversee TRIUMF activities, providing TRIUMF management the opportunity to present progress and discuss future directions for the facility
- The NRC also administers the Advisory Committee on TRIUMF (ACOT), composed of international experts within disciplines that span TRIUMF's research and technology activities
    - ACOT reports its findings to the NRC and TRIUMF senior management twice annually, making recommendations on programs and management as well as reporting on the scientific and technological achievements of TRIUMF programs

and facilities

- Observer representatives from the National Sciences and Engineering Research Council of Canada, the Canada Foundation for Innovation, the Canadian Institute of Nuclear Physics, the Canadian Institute of Particle Physics, the materials science community and TRIUMF's user community ensure that TRIUMF's directions are well aligned with the research community's needs and that TRIUMF is working with all its constituencies across Canada
- TRIUMF has approximately 430 staff and students supported via the NRC's contribution agreement, with roughly 150 additional positions supported through other sources for specific designated purposes, including temporary funds to operate new capital infrastructure
- Annually, TRIUMF provides training for more than 200 undergraduates, graduate students and postdoctoral fellows.
    - TRIUMF has numerous programs aimed at young people, students, teachers and the general public to ensure that as many as possible share the wonder of discovery and experience the excitement generated by one of Canada's premier laboratories
    - In addition, TRIUMF offers a suite of programs to aide in the growth and development of professional skills for its graduate students and postdocs

Financial information (dollars): TRIUMF

Financial information (dollars)

Type of transfer payment	2022–23 actual spending	2023–24 actual spending	2024–25 planned spending	2024–25 total authorities available for use	2024–25 actual spending (authorities used)	Variance (2024–25 actual minus 2024–25 planned)
Total grants	-	-	-	-	-	-
Total contributions	59,325,000	60,100,000	61,196,196	61,196,196	61,196,196	-
Total program	59,325,000	60,100,000	61,196,196	61,196,196	61,196,196	-

Explanation of variances

No variance to report.

Gender-based Analysis Plus (GBA Plus)

Section 1: Institutional GBA Plus governance and capacity

Governance

Understanding impacts on diverse groups, removing barriers to participation and fostering an inclusive culture are key priorities for the NRC. In support of these priorities, the NRC engages its employees, clients and collaborators on GBA Plus practices. This includes offering GBA Plus guidance, sharing information and tools and integrating a GBA Plus lens in program design, delivery and evaluation.

The NRC's Secretary General fulfills the role of GBA Plus champion for the organization, and within the division there is a GBA Plus focal point responsible for coordinating organizational efforts. The Secretary General division represents the NRC on the federal Interdepartmental Working Group for GBA Plus and the GBA Plus focal point Network, and develops and provides guidance to integrate GBA Plus into program design and delivery.

In 2024–25, the GBA Plus focal point supported NRC employees with advice, guidance and responses to GBA Plus-related questions. To better guide staff and further build organizational knowledge and best practices, the GBA Plus focal point continued to participate in inter-governmental meetings and working groups related to GBA Plus. This included WAGE's GBA Plus interdepartmental committee and Environment and Climate Change Canada's science-based department and agency GBA Plus working group.

Capacity

In 2024–25, the NRC continued to build capacity and expand awareness of the importance of GBA Plus across the organization. The NRC's 2024–2029 Strategic Plan identifies inclusive innovation as a key priority. Inclusive innovation incorporates GBA Plus and reflects the NRC's commitment to adopting an intersectional lens and making its research, innovation and program activities inclusive and equitable for all Canadians. The NRC has engaged experts and resources to work towards the vision outlined in the plan.

In 2024–25, the NRC launched a new Equity, Diversity and Inclusion (EDI) Strategy that includes a focus on embedding inclusion in program design and delivery alongside goals related to recruiting and advancing diverse talent, fostering an inclusive and anti-racist culture, addressing systemic barriers and ensuring measurable progress.

Operationally, the NRC continued to bring together its quarterly Inclusive Innovation Community of Practice meetings. The community of practice brings together employees across the country to create dialogue on the organization's external impacts on diverse groups. It also fosters discussions on how the NRC can continue to promote an equitable, diverse and inclusive

workforce and workplace, looking specifically at how to incorporate best practices in delivering the organization's new strategic plans. The Women in Science and Innovation network continued to meet quarterly to explore the broad range of experiences, challenges and opportunities facing women in STEM.

To support the engagement of employees, we maintain an internal hub inclusive of EDI information, tools and resources, centered on GBA Plus, Indigenous engagement, anti-racism and accessibility. Essential training is provided to all-staff inclusive of EDI fundamentals, unconscious bias for all hiring managers, and other available learning opportunities to build capacity around anti-racism and GBA Plus. To ensure diverse employee voices, experiences and ideas are heard, we maintain internal employee resource groups, committees and networks, including the Women in Science and Innovation Network, Black Employee Resource Community, Persons with Disabilities Network, Indigenous Engagement Network, NRC Early Career Research Network, and others. This year, we created a new employee resource group focused on 2SLGBTQIA+ inclusion, further strengthening our commitment to fostering engagement and advocacy across the organization.

The NRC is committed to building relationships with Indigenous researchers, innovators and communities to bridge Western and Indigenous knowledge systems and to create new knowledge that can be brought to bear on the critical issues of our time. In alignment with the Truth and Reconciliation Commission's Calls to Action, the NRC continued to build intercultural competency as a first step towards positive long-term relationships with First Nations, Inuit and Métis. The key mobilizing body for this work is the NRC's Indigenous Strategy and Engagement Team. In 2024–25, the NRC's Indigenous engagement advisors helped raise awareness and improve coordination of Indigenous engagement across the NRC.

Human resources (full-time equivalents) dedicated to GBA Plus

3.0 full-time equivalents (representing a portion of many positions across the NRC).

Section 2: Gender and diversity impacts, by program

Core responsibility: Science and innovation

Program name: Research and innovation programs that include the NRC's 12 research centres and the Canadian Photonics Fabrication Centre

- Aerospace
- Aquatic and Crop Resource Development
- Automotive and Surface Transportation

- Construction
- Digital Technologies
- Energy, Mining and Environment
- Herzberg Astronomy & Astrophysics
- Human Health Therapeutics
- Medical Devices
- Metrology
- Ocean, Coastal and River Engineering
- Quantum and Nanotechnologies

Program goals: The NRC's research and innovation programs aim to produce breakthroughs and solutions to improve the lives of Canadians, contributing to continued industrial growth in critical areas.

Target population: All Canadians and sectors, including manufacturing, natural resources, artificial intelligence, quantum, transportation, aerospace, life sciences and biomanufacturing, defense and security, astronomy and metrology.

Distribution of benefits

Distribution	Group
By gender	Broadly gender-balanced
By income level	No significant distributional impacts
By age group	No significant inter-generational impacts or impacts between youth and seniors

Key program impacts on gender and diversity

The NRC's research and innovation programs continued to set targets and collect data (where possible) on their work to build and expand diverse Canadian STEM capacity in their specific fields and sectors. Selected examples of the GBA Plus indicators monitored by these programs are illustrated below.

Key program impact statistics

Statistic	Observed results	Data source	Comment
Success rates for observation proposals led by	Gemini Observatory results:	Canadian Gemini Office	Multiple years of data using the dual anonymous review process show that

Statistic	Observed results	Data source	Comment
Canadian astronomers that are women compared to proposals led by Canadian astronomers that are men monitored by the Herzberg Astronomy and Astrophysics program	• Success rate for men-led proposals: ○ Semester 2024B: 74% ○ Semester 2025A: 86% • Success rate for women-led proposals: ○ Semester 2024B: 86% ○ Semester 2025A: 67% Canada France Hawaii Telescope results: • 2025B success rate was 71% for men-led proposals • 78% for women-led proposals • Atacama Large Millimeter Array (ALMA) Cycle 11 (October 2024 to September 2025): • 4 out of 10 Canadian proposals were women-led	Canadian Time Allocation Committee Secretary Canadian ALMA duty astronomer	though numbers vary in any given year, over time the success rate for men- and women-led proposals is evening out
Number of projects implemented by the Ocean, Coastal and River Engineering (OCRE) program engaging Indigenous organizations or companies that are Indigenous-led	10	OCRE performance tracking document	This result includes all signed client and collaborator projects, for which an Indigenous or northern group is either a signatory or key participant within the project scope

Statistic	Observed results	Data source	Comment
or Northern communities led			

Other key program impacts

The NRC's research centres have advisory boards made up of the stakeholder community that provide independent advice on the overall strategic direction and priorities of the programs, while ensuring alignment with the NRC's priorities. The NRC works to ensure that program advisory boards are balanced and representative of the Canadian population.

Highlights of GBA Plus related impacts of the NRC's research and innovation programs:

- The Canadian Board for Harmonized Construction Codes made accessibility of buildings and dwellings for persons with disabilities a priority for the 2030 codes development cycle, including development of provisions for egress and evacuation from buildings and ensuring that dwelling units become more adaptable and visitable
- The Construction program and Codes Canada continued to be proactive in ensuring the representation of the four designated equity groups (persons with disabilities, Indigenous Peoples, racialized persons, women) on the National Model Code Committees (NMCC)
    - The May 2024 call-out for volunteers to serve on the NMCC for the development of the 2030 codes included the opportunity for persons to complete voluntary self-declarations which resulted in 60% of the total committee membership as identifying as being a woman, having a disability, being Indigenous or being a racialized person
- Through the Climate Resilient Built Environment program, the Construction program worked to bring resilience and sustainability measures to communities whose populations experienced disproportionate and differential impacts of climate change, including coastal areas prone to flooding and northern communities experiencing perma-frost melt due to global warming
- In the summer of 2024, the Quantum and Nanotechnologies program hosted students through the Elite and I-STEAM programs
    - These initiatives offer experiential learning opportunities that empower students from diverse backgrounds, including Indigenous communities, fostering a more inclusive environment in STEM fields
    - By engaging students in research and industry settings, these programs help to break down barriers and promote equitable access to educational and professional

opportunities, ultimately cultivating more inclusive environments

- Additionally, supervisors gain valuable insights from these programs on how tailor positive research environments to meet the unique needs of each participant

GBA Plus data collection plan

Inclusive innovation helps examine the different ways in which the NRC's work affects diverse groups by using a GBA Plus lens in program design, data collection, analysis and reporting. GBA Plus is part of a broader set of inclusive innovation priorities and reflects the NRC's commitment to adopting an intersectional lens to look at how individuals from diverse groups access and may be affected by the organization's research and its programs, as well as how the organization and its outputs can be improved through diversity.

Although NRC research impacts on gender and diversity are challenging to measure because many programs interact with research clients and collaborators and not directly with the broader Canadian populations that are the ultimate beneficiaries, the NRC continued efforts to build and adopt strategies to collect GBA Plus data from various sources and streams of work.

For example, in 2024-25, the NRC continued to collect data on the number of grants and contributions projects whose research design included GBA Plus considerations. Research project teams review their potential impacts on diverse groups and develop strategies through a GBA Plus lens to mitigate any negative impacts in the implementation of the project, which is monitored as part of the annual reporting process.

Evaluations of the NRC’s research and innovation programs are incorporating new GBA Plus components to examine aggregate workforce representation information across various levels (research staff, management, administration) and perspectives of diverse populations for informant interviews, peer review committees, surveys, and, potentially, GBA Plus case studies.

Program name: Grants and contributions programs

- Genomics Research and Development Initiative Shared Priority Projects
- Collaborative Science, Technology and Innovation Program
- Industrial Research Assistance Program
- International Affiliations
- TRIUMF
- Biologics Manufacturing Centre

Program goals: The NRC's grants and contributions programs support a range of key stakeholders to promote research and innovation in Canada.

NRC IRAP aims to help small and medium-sized enterprises (SMEs) grow through innovation and stimulate wealth creation for Canada. NRC IRAP incorporates GBA Plus practices by fostering programs that provide funding and advisory services to SMEs owned or led by persons identifying as being from equity-deserving groups. Equally, NRC IRAP works with SMEs that are looking to develop or improve their firm's EDI strategies and clients that develop products or services for diverse markets.

The goal of the NRC Collaborative Science, Technology and Innovation Program (CSTIP) is to encourage and catalyze collective research excellence, resulting in scientific discoveries and technological breakthroughs. CSTIP achieves this goal through collaborative R&D initiatives, the NRC Ideation Fund and outreach initiatives. These 3 mechanisms employ GBA Plus practices to provide equity-deserving groups with equal opportunities to participate in program initiatives, and are positively impacted by the program's outcomes.

The NRC's International Affiliations (IA) program maintains memberships in international science and technology organizations so that Canada can participate and contribute to international endeavours that promote the exchange and dissemination of knowledge in the most advanced areas of scientific and industrial research. The program aims for 100% of funded organizations to have programs to support EDI.

Under the Genomics Research and Development Initiative (GRDI), Shared Priority Projects support interdepartmental genomics research at federal government laboratories so that collectively, in collaboration with industry and academia, they can better deliver high impact solutions relevant to issues of importance to Canadians. These include protecting and improving human health, protecting the environment, sustainably managing agricultural and natural resources, and promoting economic growth. The program applies a GBA Plus lens in its program activities by analyzing the potential benefits of the GRDI on various stakeholders including equity-deserving groups.

The NRC also manages the Government of Canada's funding to TRIUMF and the Biologics Manufacturing Centre (BMC). The NRC plays an important oversight and stewardship role to guide these separate organizations, but is not directly involved in designing and running the organizations' operations. The NRC supports requirements related to monitoring the advancement of equity across gender and other dimensions through its oversight and stewardship role.

Target population: All Canadians and sectors, SMEs, academia, other government departments

Distribution of benefits

Distribution	Group
By gender	Broadly gender-balanced
By income level	No significant distributional impacts
By age group	No significant inter-generational impacts or impacts between youth and seniors

Key program impacts on gender and diversity

NRC IRAP continues to leverage its contribution agreement with Toronto Metropolitan University, established in 2023-24 to support the diversity of entrepreneurs, specifically to address needs and barriers for persons living with disabilities, Indigenous Peoples, racialized persons, and gender diverse and women entrepreneurs. The agreement provides services in areas including investment readiness, inclusive hiring, business mentorship opportunities, newcomer accelerator integration, commercialization and go-to-market strategies. Through this contribution agreement, in 2024–25, 30 NRC IRAP clients received customized EDI assessment reports and advisory services to begin implementing plans for the adoption of EDI principles in their workplaces including increasing hiring, inclusive design and addressable market.

Through Challenge programs and Cluster Support programs, CSTIP continues to integrate GBA Plus in its partnership activities with private, public, academic and other research organizations within and outside Canada. CSTIP is monitoring participation and success rates of applicants from equity-deserving groups to understand barriers to participation. CSTIP is also applying GBA Plus practices to consider disaggregated impacts on diverse groups of Canadians during the design of Challenge programs.

The International Affiliations program aims for all funded organizations to have programs to support EDI. The program funds a wide variety of scientific discipline based international unions or committees, which helps them achieve their EDI goals. The actions taken by the supported organizations contribute to improving the impact of the programs on diverse groups and removing barriers to accessibility.

The GRDI program collaborates with universities and the private sector, creating economic, environmental and social benefits for Canadians through vital genomics research. The NRC's role in the GRDI is to provide a coordination function, through program organization, communication, networking and outreach support. In this role, the NRC aims to promote analysis of the potential benefits of the GRDI on various stakeholders including equity-deserving groups.

Key program impact statistics

Statistic	Observed results	Data source	Comment
Number of SMEs that engage with a support organization to develop or improve EDI plans	30	NRC IRAP CRM Report	A CTO with Toronto Metropolitan University (valued at $200,000), was launched to support 30 SMEs in their completion of the Diversity Institute's Diversity Assessment Tool, a tool to create customized EDI Plans. The target was met with 30 SMEs completing the assessment and receiving customized EDI plans.
Youth Employment Program participants that self-identified as women	53%	NRC IRAP CRM Report	
Funded firms that chose to self-declare as having 50% or greater ownership by equity deserving groups	Women: 18% Racialized persons: 21% Indigenous Peoples: 2% Persons with a Disability: 2%	NRC IRAP CRM Report	NRC IRAP's EDI data collection process is voluntary. Clients who received funding or submitted a project proposal may self-declare the ownership profile of their business; clients who only received advisory services are not asked to self-declare and are not reflected in this result. Business owners who identify with more than one employment equity group are reflected in the percentages for each employment equity group.
Success rate for women-led New Beginnings Round 6 proposals	27%	Intake form and final results	N/A
Number of stakeholder events organized by CSTIP	10	Event tracking is done	N/A

Statistic	Observed results	Data source	Comment
that contribute to the advancement of underrepresented groups in STEM		internally through several means, including NRC's SharePoint system.	
Percentage of supported international organizations or their respective Canadian National Committees (CNCs) that had initiatives and projects that benefit equity-deserving groups	100%	Program annual performance report	N/A

Other key program impacts

NRC IRAP's Youth Employment program ensures the Canadian job market has a highly qualified and skilled youth workforce from all backgrounds and abilities. In 2024–25, NRC IRAP met or exceeded the program’s targets for recipients that identified as women, racialized persons, youth with a disability, and youth living in rural, remote or official language minority communities.

The percentage of job placements for Indigenous Peoples was 2% (target of 3%), racialized persons was 32% (target of 25%), youth with a disability was 5% (target of 3%), youth living in rural and remote communities was 4% (target of 2%), youth living in official language minority communities was 7% (target of 2%) and lastly, 53% of participants self-identified as women, which was above target of 50%.

The International Affiliations Program (IA) funded organizations that prioritize equity, diversity and inclusion (EDI) objectives. For example, the Canadian National Committee (CNC) for IUPsyS launched multiple $2,500 bursaries, supported by IA funding, specifically for equity-deserving affiliates, along with travel grants to assist equity-deserving students attending their 2024 convention. Furthermore, IA collaborated with representatives from each Canadian National Committee to integrate GBA Plus into the annual performance review process to monitor CNC projects and initiatives that benefit equity-deserving groups. This process was also used to document unions with outstanding EDI policies and to support the development of similar initiatives.

GBA Plus data collection plan

In 2025–26, NRC IRAP will continue to implement a voluntary data collection process for clients to self-declare employment equity information related to their business ownership, leadership and board composition. NRC IRAP will also continue to collect GBA Plus-related data and leverage the Treasury Board Secretariat's Business Innovation and Growth Support data to understand the experience of equity-deserving groups in accessing support and to develop mitigation strategies to address any barriers.

The NRC's National Program Office will continue to work to improve GBA Plus data collection and encourage self-declaration of peer reviewers who evaluate projects and researchers participating in projects under CSTIP. All CSTIP Challenge programs will continue to be co-developed through significant stakeholder engagement, with GBA Plus considerations factored into program design.

Furthermore, all CSTIP proposal templates will continue to request information on GBA Plus considerations and recipients will report back on their GBA Plus strategies. Small Teams Initiatives and Ideation Fund proposals will continue to be reviewed to ensure GBA Plus considerations have been properly addressed and included in the proposals' designs.

The NRC's role in the GRDI includes conducting studies and analyses to serve as inputs in the determination of GRDI-wide research priorities, providing management and administration support and supporting performance management, reporting, evaluation and communications.

Program name: Other programs

- Business Management Support (Enabling)
- Design and Fabrication Services (Enabling)
- National Science Library
- Research Information Technology Platforms (Enabling)
- Special Purpose Real Property (Enabling)

Program goals: The NRC's other programs support external and internal efforts to advance knowledge and support the NRC's research and innovation programs.

Target population: All Canadians, other government departments, NRC employees (internal)

Key program impacts on gender and diversity

The NRC's National Science Library (NSL) program incorporates GBA Plus in its activities by ensuring that content is easily accessible to all Canadians, and that a NSL catalogues contain resources that support and represent EDI.

The NRC's other enabling programs include:

- Business Management Support that provides critical client engagement, technology transfer and commercialization support to NRC research programs
- Design and Fabrication Services that includes a comprehensive and national set of services to all NRC programs and science and technology initiatives in custom and innovative computer-aided design, high-precision mechanical engineering, expert fabrication and advice on quality
- Research Information and Technology Platforms (RITP) that provides NRC researchers access to a multitude of IT tools and support services that are critical to delivering research outcomes
- Special Purpose Real Property program that manages the NRC's real property portfolio

Key program impact statistics

Statistic	Observed results	Data source	Comment
Number of articles from the NSL print collection delivered to external libraries via interlibrary loan	1,504	Worldshare ILL	The external ILL program launched in July 2024 so this represents 9 months' worth of data
Downloads of publicly accessible NRC collections and publications via the Digital Repository and NPArC	4,457,569 downloads	NRC digital repository statistics	N/A
Downloads of open access articles made publicly available through NSL-negotiated library agreements	Over 358,621 NRC authored peer-reviewed articles were downloaded globally	Publisher statistics	45% of the downloads originated from developing continents such as Asia, Latin America and Africa
Accessibility assessments completed as an operational deliverable for	34 full and partial web accessibility assessments and	Web Application Development team	N/A

Statistic	Observed results	Data source	Comment
items such as forms, web pages and websites	accessibility-related tasks.		

Other key program impacts

The NSL program implemented a GBA Plus data collection plan to assess the impact of its efforts to enhance access to scientific information and fulfill its commitment to making key STM archival collections, publications and peer-reviewed journals more accessible to equity-deserving and diverse communities. These efforts are part of a broader goal to reduce barriers to information and improve accessibility to all Canadians.

In 2024–25, the BMS program reviewed the on-boarding material for NRC business development employees to identify and address potential barriers and improve initiatives and services.

GBA Plus data collection plan

The NSL program will continue to implement its GBA Plus data collection plan in 2025–26 to assess the impacts of its efforts in enhancing access to scientific information for equity-deserving groups and to understand the benefits for diverse communities. Quantitative and qualitative data will continue to be collected on specific GBA Plus initiatives in the form of usage statistics and client feedback, serving as evidence of the NSL’s accomplishments and impacts on diverse groups.

This includes initiatives to digitize NRC collections and make them publicly available, reducing barriers to accessing information and increasing accessibility for all Canadians. To better assess the effectiveness of the initiatives, the program will continue to gather data on the quantity of items being transformed into a digital format as well as the number of downloads and views after being published online.

The RITP program will continue to track the progress of action items included in the NRC's Accessibility Plan 2023–25. The NRC's Knowledge, Information and Technology Services Branch, responsible for the RITP program, introduced a range of software tools to promote accessibility and GBA Plus considerations, including Dragon Professional v16 with speech recognition and control, as well as PDF Accessibility Checker to ensure PDF documents meet accessibility standards. Ongoing tasks initiated in 2023–24 will be further developed in 2025–26, including regular accessibility assessments of current websites and applications, creating an inventory of digital resources and prioritizing and tracking improvement.

The Special Purpose Real Property program will also continue to track the progress of action items included in the NRC's Accessibility Plan 2023–25. In 2023–24, the NRC's Office of Facilities Renewal Management developed GBA Plus project criteria to improve the equity and inclusion for new and existing investment projects. These criteria will provide data for existing projects approved under the first wave of NRC's facilities revitalization efforts. Data collection for all new proposals starting with the second wave in 2024–25 is expected to begin in 2025–26.

Response to parliamentary committees and external audits

Response to parliamentary committees

In 2024–25, the following Parliamentary Committee reports required a response:

Standing Committee on Science and Research

- Report 11: Incorporating Indigenous Knowledge and Science in Canadian Research and Policy Development
    - The NRC reviewed the Government Response to the Committee's report, which examined how Indigenous knowledge and science can be meaningfully integrated into research and policy development in Canada
- Report 13: Science and Research in Canada's Arctic in Relation to Climate Change
    - The NRC reviewed the CIRNAC-led Memorandum to Cabinet outlining the Government's response to the Committee's study on science and research in Canada's Arctic in relation to climate change
- Report 13: Science and Research in Canada's Arctic in Relation to Climate Change
    - The NRC's Program Director of the Arctic and Northern Challenge program, Anne Barker, and the NRC's Secretary General, Dr. Shannon Quinn, appeared as witnesses at the Committee's study on May 28, 2024

Standing Committee on Public Accounts

- Report 6: Sustainable Development Technology Canada, of the 2024 Reports 5 to 7 of the Auditor General of Canada
    - The NRC President, Mitch Davies, and the Vice-President of NRC IRAP, David Lisk, appeared as witnesses before the Committee on September 3, 2024, during its study of the Auditor General of Canada's 2024 Reports 5 to 7, specifically focusing on Report 6 concerning Sustainable Development Technology Canada

Standing Senate Committee on Energy, the Environment and Natural Resources

- Report 6: The Canadian Critical Minerals Strategy and Report 7: Canadian Net-Zero Emissions Accountability Act—2024 Report
    - The NRC Director General of Construction, Thomas Ferguson, was scheduled to appear as a witness during the Committee's study of the Commissioner of the Environment and Sustainable Development 2024 Fall Reports
    - The meeting, originally set for November 19, 2024, was cancelled

Standing Senate Committee on Agriculture and Forestry

- Report 13: Critical Ground: Why soil is Essential to Canada's Economic, Environmental, Human, and Social Health
    - The NRC was invited to review the Government Response to the Committee's Thirteenth Report
    - As the NRC does not conduct research related to soil health, it provided a NIL response

Response to audits conducted by the Office of the Auditor General of Canada (including audits conducted by the Commissioner of the Environment and Sustainable Development)

There were no audits in 2024–25 requiring a response.

Response to audits conducted by the Public Service Commission of Canada or the Office of the Commissioner of Official Languages

There were no audits in 2024–25 requiring a response.